

This safety data sheet was created pursuant to the requirements of:  
UK REACH Regulations (SI 2019/758 as amended)

**Supersedes date** 24-Jan-2019\*\*\*

**Revision date** 19-Jun-2026

**Revision Number** 5

## **SECTION 1: Identification of the substance/mixture and of the company/undertaking**

### **1.1. Product identifier**

|                                 |                                                                                                                                                                                                                                                                |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product Code(s)</b>          | 22768***                                                                                                                                                                                                                                                       |
| <b>Safety data sheet number</b> | 22768***                                                                                                                                                                                                                                                       |
| <b>Product Name</b>             | DIMETHOXYMETHANE                                                                                                                                                                                                                                               |
| <b>EC Number</b>                | 203-714-2***                                                                                                                                                                                                                                                   |
| <b>CAS No</b>                   | 109-87-5***                                                                                                                                                                                                                                                    |
| <b>Synonyms</b>                 | METHYLAL PURE, METHYLAL PURE GRADE, METHYLAL COSMETIC, METHYLAL PURE DEODORISED, METHYLAL ANHYDROUS, METHYLAL PURE CIR-MB, METHYLAL ANH CIR-MB, METHYLAL PURE DEODORISED CIR-MB, METHYLAL PURE DEODORISED BCIRMB, METHYLAL PURE BCIRMB, METHYLAL ANH BCIRMB*** |
| <b>Pure substance/mixture</b>   | Substance***                                                                                                                                                                                                                                                   |
| <b>Molecular weight</b>         | 76.08***                                                                                                                                                                                                                                                       |

### **1.2. Relevant identified uses of the substance or mixture and uses advised against**

|                        |                                                                                                                                                                                                                                                                                |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Recommended use</b> | Industrial application<br>Solvent<br>Cosmetics<br>Chemicals used in the synthesis and / or formulation of industrial products<br>Coatings<br>Paint thinner<br>Laboratory reagent<br>Adhesives<br>Lubricant<br>Grease<br>Polymer additive<br>Personal care<br>Cleaning agent*** |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### **1.3. Details of the supplier of the safety data sheet**

#### **Supplier**

Univar Solutions UK Ltd  
Aquarius House  
6 Mid Point Business Park  
Bradford  
GBR

For further information, please contact

**E-mail address** SDS.EMEA@univarsolutions.com

**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306

**1.4. Emergency telephone number**

Emergency Telephone SGS - +32 (0)3 575 55 55 (24h)

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture**

|                      |                           |
|----------------------|---------------------------|
| Flammable liquids*** | Category 2*** - (H225)*** |
|----------------------|---------------------------|

**2.2. Label elements**

**Signal word**  
Danger\*\*\*

**Hazard statements**

H225 - Highly flammable liquid and vapour\*\*\*

**Precautionary statements**

P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking

P233 - Keep container tightly closed

P363 - Wash contaminated clothing before reuse

P403 + P235 - Store in a well-ventilated place. Keep cool

P501 - Dispose of contents/ container to an approved waste disposal plant\*\*\*

**2.3. Other hazards**

No information available.

**SECTION 3: Composition/information on ingredients****3.1 Substances\*\*\***

| Chemical name                   | Weight-%  | EC No (EU Index No) | UK REACH registration number | Classification according to GB CLP (SI 2020/1567 as amended) | Specific concentration limit (SCL) | M-Factor | M-Factor (long-term) |
|---------------------------------|-----------|---------------------|------------------------------|--------------------------------------------------------------|------------------------------------|----------|----------------------|
| DIMETHOXYMETHANE***<br>109-87-5 | 90 - 100% | 203-714-2***        | -                            | Flam. Liq. 2 (H225)***                                       | -                                  | -        | -                    |

**Full text of H- and EUH-phrases: see section 16**

This product does not contain candidate substances of very high concern at a concentration  $\geq 0.1\%$  (UK REACH Article 59)

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

|                                    |                                                                                                                                                                                                                                                                        |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inhalation                         | Get medical attention if symptoms occur. Remove to fresh air.***                                                                                                                                                                                                       |
| Eye contact                        | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area.***                                                                                                                |
| Skin contact                       | Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.***                                                                                                                                                               |
| Ingestion                          | Rinse mouth.                                                                                                                                                                                                                                                           |
| Self-protection of the first aider | Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information.*** |

### 4.2. Most important symptoms and effects, both acute and delayed

|            |                                                                                                                          |
|------------|--------------------------------------------------------------------------------------------------------------------------|
| Inhalation | Inhalation of high vapour concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.*** |
| Dermal     | Prolonged contact may cause redness and irritation.***                                                                   |

### 4.3. Indication of any immediate medical attention and special treatment needed

|                 |                        |
|-----------------|------------------------|
| Note to doctors | Treat symptomatically. |
|-----------------|------------------------|

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

|                                |                                                                                          |
|--------------------------------|------------------------------------------------------------------------------------------|
| Suitable Extinguishing Media   | Dry chemical. Carbon dioxide (CO <sub>2</sub> ). Water spray. Alcohol resistant foam.*** |
| Large Fire                     | CAUTION: Use of water spray when fighting fire may be inefficient.                       |
| Unsuitable extinguishing media | Do not scatter spilled material with high pressure water streams.                        |

### 5.2. Special hazards arising from the substance or mixture

|                                            |                                                                                                                                                                                                                 |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Specific hazards arising from the chemical | Risk of ignition. Keep product and empty container away from heat and sources of ignition. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.*** |
| Hazardous combustion products              | Carbon oxides.***                                                                                                                                                                                               |

### 5.3. Advice for firefighters

|                                                                |                                                                                                                                    |
|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|
| Special protective equipment and precautions for fire-fighters | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |
|----------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------|

## SECTION 6: Accidental release measures

**6.1. Personal precautions, protective equipment and emergency procedures**

|                                 |                                                                                                                                                                                                                                                                                                               |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Personal precautions</b>     | Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Take precautionary measures against static discharges.*** |
| <b>Other information</b>        | Ventilate the area.***                                                                                                                                                                                                                                                                                        |
| <b>For emergency responders</b> | Use personal protection recommended in Section 8.                                                                                                                                                                                                                                                             |

**6.2. Environmental precautions**

|                                  |                                                                                                                                                         |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Environmental precautions</b> | Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.*** |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|

**6.3. Methods and material for containment and cleaning up**

|                                        |                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Methods for containment</b>         | Stop leak if you can do it without risk. Do not touch or walk through spilled material. A vapour suppressing foam may be used to reduce vapours. Dyke far ahead of spill to collect run-off water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.*** |
| <b>Methods for cleaning up</b>         | Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.***                                                                                                                                                                                                    |
| <b>Prevention of secondary hazards</b> | Clean contaminated objects and areas thoroughly observing environmental regulations.                                                                                                                                                                                                                                                                              |

**6.4. Reference to other sections**

|                                    |                                                                          |
|------------------------------------|--------------------------------------------------------------------------|
| <b>Reference to other sections</b> | See section 8 for more information. See section 13 for more information. |
|------------------------------------|--------------------------------------------------------------------------|

**SECTION 7: Handling and storage****7.1. Precautions for safe handling**

|                                       |                                                                                                                                                                                                                                                                                           |
|---------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Advice on safe handling</b>        | Use personal protection equipment. Avoid contact with skin and eyes. Avoid breathing vapours or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use with local exhaust ventilation. Use according to package label instructions.*** |
| <b>General hygiene considerations</b> | Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product.***                                                                                                                                            |

**7.2. Conditions for safe storage, including any incompatibilities**

|                           |                                                                                                                                                                                                                                         |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Storage Conditions</b> | Keep container tightly closed in a dry and well-ventilated place. Store in accordance with the particular national regulations. Combustible material. Keep at temperatures between -10.0 and 30.0 °C. Store contents under nitrogen.*** |
|---------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**7.3. Specific end use(s)**

**Specific use(s)**  
See section 1 for more information.

|                                      |                                                                  |
|--------------------------------------|------------------------------------------------------------------|
| <b>Risk Management Methods (RMM)</b> | The information required is contained in this Safety Data Sheet. |
|--------------------------------------|------------------------------------------------------------------|

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****Exposure Limits**

\*\*\*

| Chemical name                   | United Kingdom                                                                                     |
|---------------------------------|----------------------------------------------------------------------------------------------------|
| DIMETHOXYMETHANE***<br>109-87-5 | TWA: 1000 ppm<br>TWA: 3160 mg/m <sup>3</sup><br>STEL: 1250 ppm<br>STEL: 3950 mg/m <sup>3</sup> *** |

**Biological occupational exposure limits**

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

**Derived No Effect Level (DNEL) - Workers** \*\*\*

| Chemical name                   | Oral | Dermal                       | Inhalation                         |
|---------------------------------|------|------------------------------|------------------------------------|
| DIMETHOXYMETHANE***<br>109-87-5 |      | 17.9 mg/kg bw/day [4] [6]*** | 126.6 mg/m <sup>3</sup> [4] [6]*** |

[4] Systemic health effects.\*\*\*  
[6] Long term.\*\*\*

**Derived No Effect Level (DNEL) - General Public** \*\*\*

| Chemical name                   | Oral                         | Dermal | Inhalation                        |
|---------------------------------|------------------------------|--------|-----------------------------------|
| DIMETHOXYMETHANE***<br>109-87-5 | 18.1 mg/kg bw/day [4] [6]*** |        | 31.5 mg/m <sup>3</sup> [4] [6]*** |

[4] Systemic health effects.\*\*\*  
[6] Long term.\*\*\*

**Predicted No Effect Concentration (PNEC)** \*\*\*

| Chemical name                   | Freshwater     | Freshwater<br>(intermittent release) | Marine water  | Marine water<br>(intermittent release) | Air |
|---------------------------------|----------------|--------------------------------------|---------------|----------------------------------------|-----|
| DIMETHOXYMETHANE***<br>109-87-5 | 14.577 mg/L*** |                                      | 1.477 mg/L*** |                                        |     |

| Chemical name                   | Freshwater<br>sediment         | Marine sediment     | Sewage treatment | Soil                       | Food chain |
|---------------------------------|--------------------------------|---------------------|------------------|----------------------------|------------|
| DIMETHOXYMETHANE***<br>109-87-5 | 13.135 mg/kg<br>sediment dw*** | 1.3135 mg/kg dwt*** | 10 g/L***        | 4.6538 mg/kg soil<br>dw*** |            |

**8.2. Exposure controls****Engineering controls**

No information available.

**Personal protective equipment**

**Eye/face protection** Tight sealing safety goggles. Wear safety glasses with side shields (or goggles). According to EN 16321-1.\*\*\*

**Hand protection** Wear suitable gloves. Impervious gloves. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves. Gloves must conform to standard EN 374.\*\*\*

| Gloves                  |                             |                 |                    |
|-------------------------|-----------------------------|-----------------|--------------------|
| Duration of contact     | PPE - Glove material        | Glove thickness | Break through time |
| Long term (repeated)*** | Polyvinyl chloride (PVC)*** | 1.2 mm***       | > 60 minutes***    |

**Skin and body protection** Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.\*\*\*

**Respiratory protection** No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

**General hygiene considerations** Contaminated work clothing should not be allowed out of the workplace. Wash hands before breaks and immediately after handling the product.\*\*\*

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

|                 |                          |
|-----------------|--------------------------|
| Physical state  | Liquid***                |
| Appearance      | Liquid***                |
| Colour          | Colourless***            |
| Odour           | Characteristic.***       |
| Odour threshold | No information available |

| Property                                | Values                         | Remarks • Method          |
|-----------------------------------------|--------------------------------|---------------------------|
| Melting point / freezing point          | -104.8*** °C***                | ***                       |
| Initial boiling point and boiling range | 42.3*** °C***                  | ***                       |
| Flammability                            |                                | No information available. |
| Flammability Limit in Air               |                                | No information available. |
| Upper flammability or explosive limits  | 19.9%***                       |                           |
| Lower flammability or explosive limits  | 2.2%***                        |                           |
| Flash point                             | -30.5*** °C***                 | ***                       |
| Autoignition temperature                | 260*** °C***                   | ***                       |
| Decomposition temperature               |                                | No information available. |
| pH                                      |                                | No information available. |
| pH (as aqueous solution)                |                                | No information available. |
| Kinematic viscosity                     | 0.371*** mm <sup>2</sup> /s*** | 20.0 °C.***               |
| Dynamic viscosity                       | 0.325*** mPa s***              | ***                       |
| Water solubility                        | Soluble in water***            | ***                       |
| Solubility(ies)                         |                                | No information available. |
| Partition coefficient                   | log Pow: 0***                  | ***                       |
| Vapour pressure                         | 40 kPa***                      | @ 20.0 °C.***             |
| Relative density                        | 0.861***                       | 20.0 °C.***               |
| Bulk density                            |                                | No information available  |
| Liquid Density                          | No information available       | No information available  |
| Relative vapour density                 | 2.6***                         | ***                       |
| Particle characteristics                |                                | No information available. |
| Particle Size                           | No information available       |                           |

|                            |                                    |
|----------------------------|------------------------------------|
| Particle Size Distribution | No information available           |
| Explosive properties       | Not considered to be explosive.*** |
| Oxidising properties       | No information available           |

**9.2. Other information**

|                  |                                      |
|------------------|--------------------------------------|
| Molecular weight | 76.08*** ≥ 99.5 %***                 |
| Refractive Index | 1.353*** 0.11 (butyl acetate = 1)*** |

**SECTION 10: Stability and reactivity****10.1. Reactivity**

|            |                                                 |
|------------|-------------------------------------------------|
| Reactivity | Stable under recommended storage conditions.*** |
|------------|-------------------------------------------------|

**10.2. Chemical stability**

|           |                                 |
|-----------|---------------------------------|
| Stability | Stable under normal conditions. |
|-----------|---------------------------------|

**Explosion data**

|                                  |         |
|----------------------------------|---------|
| Sensitivity to mechanical impact | None.   |
| Sensitivity to static discharge  | Yes.*** |

**10.3. Possibility of hazardous reactions**

|                                    |                               |
|------------------------------------|-------------------------------|
| Possibility of hazardous reactions | None under normal processing. |
|------------------------------------|-------------------------------|

**10.4. Conditions to avoid**

|                     |                                                                                                               |
|---------------------|---------------------------------------------------------------------------------------------------------------|
| Conditions to avoid | Heat, flames and sparks. Keep away from open flames, hot surfaces and sources of ignition. Excessive heat.*** |
|---------------------|---------------------------------------------------------------------------------------------------------------|

**10.5. Incompatible materials**

|                        |                                           |
|------------------------|-------------------------------------------|
| Incompatible materials | Strong acids. Strong oxidising agents.*** |
|------------------------|-------------------------------------------|

**10.6. Hazardous decomposition products**

|                                  |                   |
|----------------------------------|-------------------|
| Hazardous decomposition products | Carbon oxides.*** |
|----------------------------------|-------------------|

**SECTION 11: Toxicological information****11.1. Information on toxicological effects****Information on likely routes of exposure****Product Information**

|              |                                                        |
|--------------|--------------------------------------------------------|
| Inhalation   | May cause irritation.***                               |
| Eye contact  | May cause temporary eye irritation.***                 |
| Skin contact | Prolonged contact may cause redness and irritation.*** |
| Ingestion    | Gastrointestinal discomfort.***                        |

**Symptoms related to the physical, chemical and toxicological characteristics**

|          |                           |
|----------|---------------------------|
| Symptoms | No information available. |
|----------|---------------------------|

**Acute toxicity****Numerical measures of toxicity**

\*\*\*

**Component Information**

\*\*\*

| Chemical name       | Oral LD50           | Dermal LD50              | Inhalation LC50          |
|---------------------|---------------------|--------------------------|--------------------------|
| DIMETHOXYMETHANE*** | 6423 mg/kg (Rat)*** | > 5000 mg/kg (Rabbit)*** | 15,000 mg/l ( Rat )4h*** |

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Skin corrosion/irritation** No information available.

**Serious eye damage/eye irritation** No information available.

**Respiratory or skin sensitisation** No information available.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

**Reproductive toxicity** No information available.

**STOT - single exposure** No information available.

**STOT - repeated exposure** No information available.

| Method                                                                    | Species | Exposure route | Effective dose  | Exposure time | Results     |
|---------------------------------------------------------------------------|---------|----------------|-----------------|---------------|-------------|
| OECD Test No. 413:<br>Sub-chronic Inhalation<br>Toxicity: 90-day Study*** | Rat***  | Vapour***      | 6.3 ppm/6h/d*** | 90 days***    | Negative*** |

**Aspiration hazard** No information available.

**Other adverse effects** No information available.

**SECTION 12: Ecological information****12.1. Toxicity**

**Ecotoxicity** Not considered to be harmful to aquatic life.\*\*\*

**DIMETHOXYMETHANE (109-87-5)**

| Method | Species       | Endpoint type | Effective dose | Exposure time | Results |
|--------|---------------|---------------|----------------|---------------|---------|
|        | Fish***       | LC50***       | > 1000 mg/L*** | 96 hours***   |         |
|        | Water flea*** | LC50***       | > 1200 mg/L*** | 48 hours***   |         |

| Chemical name           | Algae/aquatic plants | Fish                                                   | Toxicity to microorganisms | Crustacea |
|-------------------------|----------------------|--------------------------------------------------------|----------------------------|-----------|
| DIMETHOXYMETHANE*<br>** | -                    | LC50: 6260 - 7800mg/L<br>(96h, Pimephales promelas)*** | -                          | -         |

**12.2. Persistence and degradability**

**Persistence and degradability** No information available.\*\*\*

**12.3. Bioaccumulative potential**

**Bioaccumulation** No information available.\*\*\*

**Component Information** \*\*\*

| Chemical name       | Partition coefficient |
|---------------------|-----------------------|
| DIMETHOXYMETHANE*** | 0***                  |

**12.4. Mobility in soil**

**Mobility in soil** Soluble in water.\*\*\*

**12.5. Results of PBT and vPvB assessment**

**PBT and vPvB assessment** The product does not contain any substance(s) classified as PBT or vPvB.

| Chemical name       | PBT and vPvB assessment            |
|---------------------|------------------------------------|
| DIMETHOXYMETHANE*** | The substance is not PBT / vPvB*** |

**12.6. Other adverse effects**

No information available.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods**

**Waste from residues/unused products** Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.\*\*\*

**Contaminated packaging** Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.\*\*\*

**SECTION 14: Transport information****IATA**

- 14.1 UN number or ID number** UN1234\*\*\*  
**14.2 UN proper shipping name** METHYLAL\*\*\*  
**14.3 Transport hazard class(es)** 3\*\*\*  
**14.4 Packing group** II\*\*\*  
**14.5 Environmental hazards** No\*\*\*  
**14.6 Special precautions for user**  
**Special Provisions** None  
**ERG Code** 3H\*\*\*

**IMDG**

- 14.1 UN number or ID number** UN1234\*\*\*

|                                                              |                          |
|--------------------------------------------------------------|--------------------------|
| 14.2 UN proper shipping name                                 | METHYLAL***              |
| 14.3 Transport hazard class(es)                              | 3***                     |
| 14.4 Packing group                                           | II***                    |
| 14.5 Environmental hazards                                   | No***                    |
| 14.6 Special precautions for user                            |                          |
| Special Provisions                                           | None                     |
| EmS-No                                                       | F-E, S-D***              |
| 14.7 Maritime transport in bulk according to IMO instruments | No information available |

**RID**

|                                   |             |
|-----------------------------------|-------------|
| 14.1 UN number or ID number       | UN1234***   |
| 14.2 UN proper shipping name      | METHYLAL*** |
| 14.3 Transport hazard class(es)   | 3***        |
| 14.4 Packing group                | II***       |
| 14.5 Environmental hazards        | No***       |
| 14.6 Special precautions for user |             |
| Special Provisions                | None        |
| Classification code               | F1***       |

**ADR**

|                                   |             |
|-----------------------------------|-------------|
| 14.1 UN number or ID number       | UN1234***   |
| 14.2 UN proper shipping name      | METHYLAL*** |
| 14.3 Transport hazard class(es)   | 3***        |
| 14.4 Packing group                | II***       |
| 14.5 Environmental hazards        | No***       |
| 14.6 Special precautions for user |             |
| Special Provisions                | None        |
| Classification code               | F1***       |
| Tunnel restriction code           | (D/E)***    |

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****National regulations** \*\*\***Authorisations and/or restrictions on use:**

This product contains one or more substances subject to restriction (UK REACH - Annex XVII).  
This product does not contain substances subject to authorisation (UK REACH - Annex XIV).\*\*\*

**Persistent Organic Pollutants**

Not applicable

**Export Notification requirements**

Not applicable

**Dangerous substance category per COMAH Regulations 2015 (as amended)**

P5c - FLAMMABLE LIQUIDS\*\*\*

**Named dangerous substances per COMAH Regulations 2015 (as amended)**

Not applicable

**The Ozone-Depleting Substances Regulations 2015**

Not applicable

**The Biocidal Products Regulations 2001 (as amended)**

Not applicable

**The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017 (as amended)**

Not applicable

**Poisons Act 1972 (Explosive Precursors) Regulations (as Amended)**

Not applicable

**International Inventories**

|                      |                                                  |
|----------------------|--------------------------------------------------|
| <b>TSCA</b>          | Contact supplier for inventory compliance status |
| <b>DSL/NDL</b>       | Contact supplier for inventory compliance status |
| <b>EINECS/ELINCS</b> | Contact supplier for inventory compliance status |
| <b>ENCS</b>          | Contact supplier for inventory compliance status |
| <b>IECSC</b>         | Contact supplier for inventory compliance status |
| <b>KECI</b>          | Contact supplier for inventory compliance status |
| <b>PICCS</b>         | Contact supplier for inventory compliance status |
| <b>AIIC</b>          | Contact supplier for inventory compliance status |
| <b>NZIoC</b>         | Contact supplier for inventory compliance status |

**Legend:**

|                      |                                                                                                    |
|----------------------|----------------------------------------------------------------------------------------------------|
| <b>TSCA</b>          | - United States Toxic Substances Control Act Section 8(b) Inventory                                |
| <b>DSL/NDL</b>       | - Canadian Domestic Substances List/Non-Domestic Substances List                                   |
| <b>EINECS/ELINCS</b> | - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances |
| <b>ENCS</b>          | - Japan Existing and New Chemical Substances                                                       |
| <b>IECSC</b>         | - China Inventory of Existing Chemical Substances                                                  |
| <b>KECL</b>          | - Korean Existing and Evaluated Chemical Substances                                                |
| <b>PICCS</b>         | - Philippines Inventory of Chemicals and Chemical Substances                                       |
| <b>AIIC</b>          | - Australian Inventory of Industrial Chemicals                                                     |
| <b>NZIoC</b>         | - New Zealand Inventory of Chemicals                                                               |

**15.2. Chemical safety assessment**

**Chemical Safety Report** A Chemical Safety Assessment has been carried out for this substance\*\*\*

**SECTION 16: Other information****Key or legend to abbreviations and acronyms used in the safety data sheet****Full text of H-Statements referred to under section 3**

H225 - Highly flammable liquid and vapour\*\*\*

**Legend**

SVHC: Substances of Very High Concern for Authorisation:

**Legend Section 8: Exposure controls/personal protection**

|                                                                |                             |             |                                  |
|----------------------------------------------------------------|-----------------------------|-------------|----------------------------------|
| <b>TWA</b>                                                     | TWA (time-weighted average) | <b>STEL</b> | STEL (Short Term Exposure Limit) |
| <b>Ceiling</b>                                                 | Maximum limit value         | <b>*</b>    | Skin designation                 |
| <b>+</b>                                                       | Sensitisers                 |             |                                  |
| Revision Note ***Indicates updated data since last publication |                             |             |                                  |

**Classification procedure**

|                                                                 |                       |
|-----------------------------------------------------------------|-----------------------|
| Classification according to Regulation (EC) No. 1272/2008 [CLP] | Method Used           |
| Acute oral toxicity***                                          | Calculation method*** |
| Acute dermal toxicity***                                        | Calculation method*** |
| Acute inhalation toxicity - gas***                              | Calculation method*** |
| Acute inhalation toxicity - vapour***                           | Calculation method*** |
| Acute inhalation toxicity - dust/mist***                        | Calculation method*** |
| Skin corrosion/irritation***                                    | Calculation method*** |
| Serious eye damage/eye irritation***                            | Calculation method*** |
| Respiratory sensitisation***                                    | Calculation method*** |

|                             |                       |
|-----------------------------|-----------------------|
| Skin sensitisation***       | Calculation method*** |
| Mutagenicity***             | Calculation method*** |
| Carcinogenicity***          | Calculation method*** |
| Reproductive toxicity***    | Calculation method*** |
| STOT - single exposure***   | Calculation method*** |
| STOT - repeated exposure*** | Calculation method*** |
| Acute aquatic toxicity***   | Calculation method*** |
| Chronic aquatic toxicity*** | Calculation method*** |
| Aspiration hazard***        | Calculation method*** |
| Ozone***                    | Calculation method*** |

**Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
European Chemicals Agency (ECHA) Committee for Risk Assessment (ECHA\_RAC)  
European Chemicals Agency (ECHA) (ECHA\_API)  
Environmental Protection Agency  
Acute Exposure Guideline Level(s) (AEGLS)  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
National Institute of Technology and Evaluation (NITE)  
Australian National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
U.S. National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organisation for Economic Co-operation and Development Environment, Health, and Safety Publications  
Organisation for Economic Co-operation and Development High Production Volume Chemicals Programme  
Organisation for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

**Prepared By** Jitendra Panchal\*\*\*

**Supersedes date** 24-Jan-2019\*\*\*

**Revision date** 19-Jun-2026

**This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)**  
**Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work**

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** DIMETHOXYMETHANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119664781-31-XXXX  
**CAS No** 109-87-5  
**EC No (EU Index No)** 203-714-2  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Manufacture of substance  
**Type** Worker  
**Main user group** Industrial uses: Uses of substances as such or in preparations at industrial sites  
**Environmental release category(ies)** ERC1 - Manufacture of substances  
**Process category(ies)** PROC1 - Use in closed process, no likelihood of exposure  
 PROC2 - Use in closed, continuous process with occasional controlled exposure  
 PROC3 - Use in closed batch process (synthesis or formulation)  
 PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises  
 PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities  
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities  
 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)  
 PROC15 - Use as laboratory reagent  
 PROC28 - Manual maintenance (cleaning and repair) of machinery  
**Sector(s) of use** SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC1 - Manufacture of substances

##### Amounts used

|       |                       |
|-------|-----------------------|
| Type  | Daily amount per site |
| Value | 45                    |
| Units | tonnes                |

|       |                        |
|-------|------------------------|
| Type  | Annual amount per site |
| Value | 4500                   |
| Units | t(ons)/year            |

##### Product characteristics

|                                           |        |
|-------------------------------------------|--------|
| Physical form of product                  | Liquid |
| Vapour pressure                           | 40 kPa |
| Temperature associated to vapour pressure | 20 C   |

**Conditions and measures related to municipal sewage treatment plant**

|                                              |                                         |
|----------------------------------------------|-----------------------------------------|
| Assumed domestic sewage treatment plant flow | 2000 m3/d                               |
| Sludge treatment                             | No application of sewage sludge to soil |

**Risk management measures**

|                                                                                       |                                      |
|---------------------------------------------------------------------------------------|--------------------------------------|
| Technical onsite conditions and measures to reduce or limit discharges, air emissions | Onsite wastewater treatment required |
|---------------------------------------------------------------------------------------|--------------------------------------|

**Conditions and measures related to external treatment of waste for disposal**

|          |                                                                                                          |
|----------|----------------------------------------------------------------------------------------------------------|
| Disposal | External treatment and disposal of waste should comply with applicable local and/or national regulations |
|----------|----------------------------------------------------------------------------------------------------------|

**Control of worker exposure**

|                                                                                        |                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                                                                                                  |
| Title                                                                                  | General exposures (closed systems)                                                                                                                                                                                                                                        |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                     |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                         |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                                |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training<br>Use suitable eye protection<br>Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately<br>Clean equipment and the work area every day<br>Regular inspection and maintenance of equipment and machines<br>Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                                    |

|                                                                                        |                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC2 - Use in closed, continuous process with occasional controlled exposure                                                                                                                                                             |
| Title                                                                                  | General exposures (closed systems)                                                                                                                                                                                                        |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                     |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                         |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                               |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately<br>Clean equipment and the work area every day<br>Regular inspection and maintenance of equipment and machines<br>Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                    |

|                                                                                        |                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC3 - Use in closed batch process (synthesis or formulation)                                                                                                                                                                            |
| Title                                                                                  | Batch process (closed systems)                                                                                                                                                                                                            |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                     |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                         |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                               |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately<br>Clean equipment and the work area every day<br>Regular inspection and maintenance of equipment and machines<br>Supervision in place to check that the RMMs in place are being used correctly and OCs followed |

|                                                                                        |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |
| Process category(ies)                                                                  | PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                                                                                                                                                          |
| Title                                                                                  | Batch process                                                                                                                                                                                                                                                     |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                        |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                                                                                   |
| Title                                                                                  | Process sampling                                                                                                                                                                                                                                                  |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 1 hour                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Local exhaust ventilation - efficiency of at least 90%                                                                                                              |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC15 - Use as laboratory reagent                                                                                                                                                                                               |
| Title                                                                                  | Laboratory activities                                                                                                                                                                                                            |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                            |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 1 hour                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                           |

|                                                                                        |                                                                                                                               |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities |
| Title                                                                                  | Bulk transfers (closed systems)                                                                                               |
| Covers concentrations up to                                                            | 100 %                                                                                                                         |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                             |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                    |

|                                                                                       |                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Conditions and measures related to personal protection, hygiene and health evaluation | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure           | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery                                                                  |
| Title                                                                                  | Equipment cleaning and maintenance                                                                                                                                                                                                                                |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                        |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                                                                                         |
| Title                                                                                  | Storage                                                                                                                                                                                                                                                          |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC2 - Use in closed, continuous process with occasional controlled exposure                                                                                                                                                    |
| Title                                                                                  | Storage                                                                                                                                                                                                                          |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                           |

### Section 3 - Exposure estimation

#### Environmental release category(ies) - ERC1 - Manufacture of substances

#### Predicted No Effect Concentration (PNEC)

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 14.58 mg/l  |
| Freshwater sediment        | 13.14 mg/kg |
| Marine water               | 1.477 mg/l  |
| Marine sediment            | 1.314 mg/kg |
| Soil                       | 4.654 mg/kg |
| Impact on Sewage Treatment | 10 mg/l     |

#### Calculation method Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 10.16 mg/l               | 0.696                             |
| Freshwater sediment         | 42.21 mg/kg              | 0.695                             |
| Marine water                | 1.016 mg/l               | 0.696                             |
| Marine sediment             | 4.221 mg/kg              | 0.695                             |
| STP: Sewage Treatment Plant | 101.5 mg/l               | 0.01                              |
| Soil                        | 0.064 mg/kg              | 0.018                             |

#### Derived No Effect Level (DNEL):

|                                           |                         |
|-------------------------------------------|-------------------------|
| Worker - dermal, long-term - systemic     | 17.9 mg/kg/d            |
| Worker - inhalative, long-term - systemic | 126.6 mg/m <sup>3</sup> |

#### Calculation method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

| Process category(ies)                                                                    | Exposure route                            | predicted exposure level | Risk characterisation ratio (RCR) |
|------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------|-----------------------------------|
| PROC1 - Use in closed process, no likelihood of exposure                                 | Worker - inhalative, long-term - systemic | 0.022 mg/m <sup>3</sup>  | <0.01                             |
| PROC1 - Use in closed process, no likelihood of exposure                                 | Worker - dermal, long-term - systemic     | 0.0034 mg/kg/d           | <0.01                             |
| PROC1 - Use in closed process, no likelihood of exposure                                 | Worker - combined, long-term - systemic   |                          | <0.01                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure            | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup>  | 0.018                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure            | Worker - dermal, long-term - systemic     | 0.069 mg/kg/d            | <0.01                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure            | Worker - combined, long-term - systemic   |                          | 0.018                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                           | Worker - inhalative, long-term - systemic | 110.9 mg/m <sup>3</sup>  | 0.035                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                           | Worker - dermal, long-term - systemic     | 0.034 mg/kg/d            | <0.01                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                           | Worker - combined, long-term - systemic   |                          | 0.035                             |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises | Worker - inhalative, long-term - systemic | 221.9 mg/m <sup>3</sup>  | 0.07                              |
| PROC4 - Use in batch and other process (synthesis) where opportunity                     | Worker - dermal, long-term - systemic     | 0.343 mg/kg/d            | 0.046                             |

|                                                                                                                                                                                                  |                                           |                          |       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------|-------|
| for exposure arises                                                                                                                                                                              |                                           |                          |       |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                                                                                         | Worker - combined, long-term - systemic   |                          | 0.071 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                  | Worker - inhalative, long-term - systemic | 88.77 mg/m <sup>3</sup>  | 0.028 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                  | Worker - dermal, long-term - systemic     | 0.069 mg/kg/d            | <0.01 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                  | Worker - combined, long-term - systemic   |                          | 0.028 |
| PROC15 - Use as laboratory reagent                                                                                                                                                               | Worker - inhalative, long-term - systemic | 110.9 mg/m <sup>3</sup>  | 0.035 |
| PROC15 - Use as laboratory reagent                                                                                                                                                               | Worker - dermal, long-term - systemic     | 0.017 mg/kg/d            | <0.01 |
| PROC15 - Use as laboratory reagent                                                                                                                                                               | Worker - combined, long-term - systemic   |                          | 0.035 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                    | Worker - inhalative, long-term - systemic | 332.9 mg/m <sup>3</sup>  | 0.106 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                    | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d            | 0.091 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                    | Worker - combined, long-term - systemic   |                          | 0.107 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - inhalative, long-term - systemic | 554.8 mg/m <sup>3</sup>  | 0.176 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d            | <0.01 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - combined, long-term - systemic   |                          | 0.177 |
| PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                         | Worker - inhalative, long-term - systemic | 0.0022 mg/m <sup>3</sup> | <0.01 |
| PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                         | Worker - dermal, long-term - systemic     | 0.0034 mg/kg/d           | <0.01 |
| PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                         | Worker - combined, long-term - systemic   |                          | <0.01 |
| PROC2 - Use in closed, continuous                                                                                                                                                                | Worker - inhalative, long-term            | 55.48 mg/m <sup>3</sup>  | 0.018 |

|                                                                               |                                         |               |       |
|-------------------------------------------------------------------------------|-----------------------------------------|---------------|-------|
| process with occasional controlled exposure                                   | - systemic                              |               |       |
| PROC2 - Use in closed, continuous process with occasional controlled exposure | Worker - dermal, long-term - systemic   | 0.069 mg/kg/d | <0.01 |
| PROC2 - Use in closed, continuous process with occasional controlled exposure | Worker - combined, long-term - systemic |               | 0.018 |

#### **Section 4 - Guidance to check compliance with the exposure scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. <http://www.ecetoc.org/tra>.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** DIMETHOXYMETHANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119664781-31-XXXX  
**CAS No** 109-87-5  
**EC No (EU Index No)** 203-714-2  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Formulation & (re)packing of substances and mixtures  
**Type** Worker  
**Main user group** Industrial uses: Uses of substances as such or in preparations at industrial sites  
**Environmental release category(ies)** ERC2 - Formulation of preparations (mixtures)  
**Process category(ies)** PROC1 - Use in closed process, no likelihood of exposure  
 PROC2 - Use in closed, continuous process with occasional controlled exposure  
 PROC3 - Use in closed batch process (synthesis or formulation)  
 PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises  
 PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)  
 PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities  
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities  
 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)  
 PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising  
 PROC15 - Use as laboratory reagent  
 PROC28 - Manual maintenance (cleaning and repair) of machinery  
  
**Sector(s) of use** SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC2 - Formulation of preparations (mixtures)

##### Amounts used

|       |                       |
|-------|-----------------------|
| Type  | Daily amount per site |
| Value | 15.1                  |
| Units | tonnes                |

|       |                        |
|-------|------------------------|
| Type  | Annual amount per site |
| Value | 1500                   |
| Units | t(ons)/year            |

##### Product characteristics

|                          |        |
|--------------------------|--------|
| Physical form of product | Liquid |
| Vapour pressure          | 40 kPa |

|                                           |      |
|-------------------------------------------|------|
| Temperature associated to vapour pressure | 20 C |
|-------------------------------------------|------|

**Conditions and measures related to municipal sewage treatment plant**

|                                              |                                         |
|----------------------------------------------|-----------------------------------------|
| Assumed domestic sewage treatment plant flow | 2000 m3/d                               |
| Sludge treatment                             | No application of sewage sludge to soil |

**Risk management measures**

|                                                                                       |                                      |
|---------------------------------------------------------------------------------------|--------------------------------------|
| Technical onsite conditions and measures to reduce or limit discharges, air emissions | Onsite wastewater treatment required |
|---------------------------------------------------------------------------------------|--------------------------------------|

**Conditions and measures related to external treatment of waste for disposal**

|          |                                                                                                          |
|----------|----------------------------------------------------------------------------------------------------------|
| Disposal | External treatment and disposal of waste should comply with applicable local and/or national regulations |
|----------|----------------------------------------------------------------------------------------------------------|

**Control of worker exposure**

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                                                                                         |
| Title                                                                                  | General exposures (closed systems)                                                                                                                                                                                                                               |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC2 - Use in closed, continuous process with occasional controlled exposure                                                                                                                                                    |
| Title                                                                                  | General exposures (closed systems)                                                                                                                                                                                               |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                           |

|                                                                                        |                                                                                            |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC3 - Use in closed batch process (synthesis or formulation)                             |
| Title                                                                                  | Batch process (closed systems)                                                             |
| Covers concentrations up to                                                            | 100 %                                                                                      |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                          |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) |
| Conditions and measures related to personal protection, hygiene and                    | Use suitable eye protection                                                                |

|                                                                             |                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| health evaluation                                                           |                                                                                                                                                                                                                                  |
| Organisational measures to prevent /limit releases, dispersion and exposure | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                      | Assumes process temperature up to 25 C                                                                                                                                                                                           |

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|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                                                                                                                                                             |
| Title                                                                                  | Batch process                                                                                                                                                                                                                                                        |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                    |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Local exhaust ventilation - efficiency of at least 90%                                                                                                                 |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                     |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                               |

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|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)                                                                                                                                  |
| Title                                                                                  | Mixing operations (open systems)                                                                                                                                                                                                                                     |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                    |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                           |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                     |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                               |

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|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery                                                                     |
| Title                                                                                  | Equipment cleaning and maintenance                                                                                                                                                                                                                                   |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                    |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                           |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                     |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                               |

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|-----------------------------|-----------------------------------------------------------------------------------------------------------------|
| Process category(ies)       | PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) |
| Title                       | Process sampling                                                                                                |
| Covers concentrations up to | 100 %                                                                                                           |

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|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 1 hour                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                        |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

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|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC15 - Use as laboratory reagent                                                                                                                                                                                               |
| Title                                                                                  | Laboratory activities                                                                                                                                                                                                            |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                            |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 1 hour                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Local exhaust ventilation - efficiency of at least 90%                                                                             |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                           |

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|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities                                                                                                                                 |
| Title                                                                                  | Filling/preparation of equipment from drums or containers.                                                                                                                                                                                                        |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Provide extract ventilation to points where emissions occur                                                                                                         |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

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|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                                                                                     |
| Title                                                                                  | Bulk transfers (closed systems)                                                                                                                                                                                                                                   |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Ensure material transfers are under containment or extract ventilation                                                                                              |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and                     | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs                                                                                     |

|                        |                                                    |
|------------------------|----------------------------------------------------|
| exposure               | in place are being used correctly and OCs followed |
| Operational conditions | Assumes process temperature up to 25 C             |

|                                                                                        |                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                                                                                        |
| Title                                                                                  | Drum/batch transfers                                                                                                                                                                                                                                                 |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                    |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Provide extract ventilation to points where emissions occur                                                                                                            |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                     |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                               |

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|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                                                                                      |
| Title                                                                                  | Drum and small package filling                                                                                                                                                                                                                                       |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 1 hour                                                                                                                                                                                                |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                    |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Fill containers/cans at dedicated fill points supplied with local extract ventilation                                                                                  |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                     |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                               |

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|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising                                                                                                                                                                    |
| Title                                                                                  | Tabletting, compression, extrusion or pelletisation                                                                                                                                                                                                                  |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                    |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Handle substance within a predominantly closed system provided with extract ventilation                                                                                |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                     |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                               |

|                                                                             |                                                                                                                                      |
|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                       | PROC1 - Use in closed process, no likelihood of exposure                                                                             |
| Title                                                                       | Storage                                                                                                                              |
| Covers concentrations up to                                                 | 100 %                                                                                                                                |
| Use frequency                                                               | Covers daily exposures up to 8 hours (unless stated differently).                                                                    |
| Technical conditions and measures to control dispersion from source towards | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Store substance within a closed system |

|                                                                                       |                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| the worker                                                                            |                                                                                                                                                                                                                                                                  |
| Conditions and measures related to personal protection, hygiene and health evaluation | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure           | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMS in place are being used correctly and OCs followed                                 |
| Operational conditions                                                                | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC2 - Use in closed, continuous process with occasional controlled exposure                                                                                                                                                    |
| Title                                                                                  | Storage                                                                                                                                                                                                                          |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Store substance within a closed system                                                                                                |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMS in place are being used correctly and OCs followed |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                           |

### Section 3 - Exposure estimation

#### Environmental release category(ies) - ERC2 - Formulation of preparations (mixtures)

##### Predicted No Effect Concentration (PNEC)

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 14.58 mg/l  |
| Freshwater sediment        | 13.14 mg/kg |
| Marine water               | 1.458 mg/l  |
| Marine sediment            | 1.314 mg/kg |
| Soil                       | 4.654 mg/kg |
| Impact on Sewage Treatment | 10 mg/l     |

##### Calculation method Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 3.409 mg/l               | 0.234                             |
| Freshwater sediment         | 14.16 mg/kg              | 0.233                             |
| Marine water                | 0.341 mg/l               | 0.234                             |
| Marine sediment             | 1.416 mg/kg              | 0.233                             |
| STP: Sewage Treatment Plant | 34.09 mg/l               | <0.01                             |
| Soil                        | 0.011 mg/kg              | <0.01                             |

##### Derived No Effect Level (DNEL):

|                                           |                         |
|-------------------------------------------|-------------------------|
| Worker - dermal, long-term - systemic     | 17.9 mg/kg/d            |
| Worker - inhalative, long-term - systemic | 126.6 mg/m <sup>3</sup> |

##### Calculation method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

| Process category(ies) | Exposure route | predicted exposure level | Risk characterisation ratio |
|-----------------------|----------------|--------------------------|-----------------------------|
|-----------------------|----------------|--------------------------|-----------------------------|

|                                                                                                                                                                                                  |                                           |                         | (RCR) |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
| PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                         | Worker - inhalative, long-term - systemic | 0.022 mg/m <sup>3</sup> | <0.01 |
| PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                         | Worker - dermal, long-term - systemic     | 0.0034 mg/kg/d          | <0.01 |
| PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                         | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                                                                                    | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup> | 0.018 |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                                                                                    | Worker - dermal, long-term - systemic     | 0.069 mg/kg/d           | <0.01 |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                                                                                    | Worker - combined, long-term - systemic   |                         | 0.018 |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                                                                                   | Worker - inhalative, long-term - systemic | 110.9 mg/m <sup>3</sup> | 0.035 |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                                                                                   | Worker - dermal, long-term - systemic     | 0.034 mg/kg/d           | <0.01 |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                                                                                   | Worker - combined, long-term - systemic   |                         | 0.035 |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                                                                                         | Worker - inhalative, long-term - systemic | 221.9 mg/m <sup>3</sup> | 0.07  |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                                                                                         | Worker - dermal, long-term - systemic     | 0.343 mg/kg/d           | 0.046 |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                                                                                         | Worker - combined, long-term - systemic   |                         | 0.071 |
| PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)                                                              | Worker - inhalative, long-term - systemic | 554.8 mg/m <sup>3</sup> | 0.176 |
| PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)                                                              | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)                                                              | Worker - combined, long-term - systemic   |                         | 0.177 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - inhalative, long-term - systemic | 554.8 mg/m <sup>3</sup> | 0.176 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual                                                | Worker - combined, long-term - systemic   |                         | 0.177 |

|                                                                                                                                   |                                           |                         |       |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
| maintenance (cleaning and repair) of machinery                                                                                    |                                           |                         |       |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                   | Worker - inhalative, long-term - systemic | 88.77 mg/m <sup>3</sup> | 0.028 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                   | Worker - dermal, long-term - systemic     | 0.069 mg/kg/d           | <0.01 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                   | Worker - combined, long-term - systemic   |                         | 0.028 |
| PROC15 - Use as laboratory reagent                                                                                                | Worker - inhalative, long-term - systemic | 11.09 mg/m <sup>3</sup> | <0.01 |
| PROC15 - Use as laboratory reagent                                                                                                | Worker - dermal, long-term - systemic     | 0.017 mg/kg/d           | <0.01 |
| PROC15 - Use as laboratory reagent                                                                                                | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup> | 0.018 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - combined, long-term - systemic   |                         | 0.019 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - inhalative, long-term - systemic | 16.64 mg/m <sup>3</sup> | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - inhalative, long-term - systemic | 16.64 mg/m <sup>3</sup> | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including                             | Worker - inhalative, long-term - systemic | 44.38 mg/m <sup>3</sup> | 0.014 |

|                                                                                                                 |                                           |                         |       |
|-----------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
| weighing)                                                                                                       |                                           |                         |       |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) | Worker - dermal, long-term - systemic     | 0.343 mg/kg/d           | <0.01 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) | Worker - combined, long-term - systemic   |                         | 0.15  |
| PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising               | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup> | 0.018 |
| PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising               | Worker - dermal, long-term - systemic     | 0.172 mg/kg/d           | <0.01 |
| PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising               | Worker - combined, long-term - systemic   |                         | 0.018 |
| PROC1 - Use in closed process, no likelihood of exposure                                                        | Worker - inhalative, long-term - systemic | 0.022 mg/m <sup>3</sup> | <0.01 |
| PROC1 - Use in closed process, no likelihood of exposure                                                        | Worker - dermal, long-term - systemic     | 0.0034 mg/kg/d          | <0.01 |
| PROC1 - Use in closed process, no likelihood of exposure                                                        | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                   | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup> | 0.018 |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                   | Worker - dermal, long-term - systemic     | 0.069 mg/kg/d           | <0.01 |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                   | Worker - combined, long-term - systemic   |                         | 0.018 |

#### **Section 4 - Guidance to check compliance with the exposure scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. <http://www.ecetoc.org/tra>.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** DIMETHOXYMETHANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119664781-31-XXXX  
**CAS No** 109-87-5  
**EC No (EU Index No)** 203-714-2  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Use as an intermediate  
**Type** Worker  
**Main user group** Industrial uses: Uses of substances as such or in preparations at industrial sites  
**Environmental release category(ies)** ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)  
**Process category(ies)** PROC1 - Use in closed process, no likelihood of exposure  
 PROC2 - Use in closed, continuous process with occasional controlled exposure  
 PROC3 - Use in closed batch process (synthesis or formulation)  
 PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises  
 PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities  
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities  
 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)  
 PROC15 - Use as laboratory reagent  
 PROC28 - Manual maintenance (cleaning and repair) of machinery  
**Sector(s) of use** SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)

#### Amounts used

|       |                       |
|-------|-----------------------|
| Type  | Daily amount per site |
| Value | 3                     |
| Units | tonnes                |

|       |                        |
|-------|------------------------|
| Type  | Annual amount per site |
| Value | 60                     |
| Units | t(ons)/year            |

#### Product characteristics

|                                           |        |
|-------------------------------------------|--------|
| Physical form of product                  | Liquid |
| Vapour pressure                           | 40 kPa |
| Temperature associated to vapour pressure | 20 C   |

**Conditions and measures related to municipal sewage treatment plant**

|                                              |                                         |
|----------------------------------------------|-----------------------------------------|
| Assumed domestic sewage treatment plant flow | 2000 m3/d                               |
| Sludge treatment                             | No application of sewage sludge to soil |

**Risk management measures**

|                                                                                       |                                      |
|---------------------------------------------------------------------------------------|--------------------------------------|
| Technical onsite conditions and measures to reduce or limit discharges, air emissions | Onsite wastewater treatment required |
|---------------------------------------------------------------------------------------|--------------------------------------|

**Conditions and measures related to external treatment of waste for disposal**

|          |                                                                                                          |
|----------|----------------------------------------------------------------------------------------------------------|
| Disposal | External treatment and disposal of waste should comply with applicable local and/or national regulations |
|----------|----------------------------------------------------------------------------------------------------------|

**Control of worker exposure**

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                                                                                         |
| Title                                                                                  | General exposures (closed systems)                                                                                                                                                                                                                               |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC2 - Use in closed, continuous process with occasional controlled exposure                                                                                                                                                    |
| Title                                                                                  | General exposures (closed systems)                                                                                                                                                                                               |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                               |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC3 - Use in closed batch process (synthesis or formulation)                                                                                                                |
| Title                                                                                  | Batch process (closed systems)                                                                                                                                                |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                         |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                             |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                    |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                   |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs |

|                        |                                                    |
|------------------------|----------------------------------------------------|
| exposure               | in place are being used correctly and OCs followed |
| Operational conditions | Assumes process temperature up to 25 C             |

|                                                                                        |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                                                                                                                                                          |
| Title                                                                                  | Batch process                                                                                                                                                                                                                                                     |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of controlled ventilation (5 to 10 air changes per hour)                                                                                                                                                                                  |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                                                                                   |
| Title                                                                                  | Process sampling                                                                                                                                                                                                                                                  |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 1 hour                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                        |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC15 - Use as laboratory reagent                                                                                                                                                                                               |
| Title                                                                                  | Laboratory activities                                                                                                                                                                                                            |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                            |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 1 hour                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                           |

|                                                                             |                                                                                                                               |
|-----------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                       | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities |
| Title                                                                       | Bulk transfers (closed systems)                                                                                               |
| Covers concentrations up to                                                 | 100 %                                                                                                                         |
| Use frequency                                                               | Covers daily exposures up to 8 hours (unless stated differently).                                                             |
| Technical conditions and measures to control dispersion from source towards | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                    |

|                                                                                       |                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| the worker                                                                            |                                                                                                                                                                                                                                                                   |
| Conditions and measures related to personal protection, hygiene and health evaluation | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure           | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery                                                                  |
| Title                                                                                  | Equipment cleaning and maintenance                                                                                                                                                                                                                                |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Drain down and flush system prior to equipment break-in or maintenance                                                                                                 |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                                                                                         |
| Title                                                                                  | Storage                                                                                                                                                                                                                                                          |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC2 - Use in closed, continuous process with occasional controlled exposure                                                                                                                                                    |
| Title                                                                                  | Storage                                                                                                                                                                                                                          |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                           |

### Section 3 - Exposure estimation

**Environmental release category(ies) - ERC6a - Industrial use resulting in manufacture of another substance (use of intermediates)**

**Predicted No Effect Concentration (PNEC)**

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 14.58 mg/l  |
| Freshwater sediment        | 13.14 mg/kg |
| Marine water               | 1.477 mg/l  |
| Marine sediment            | 1.314 mg/kg |
| Soil                       | 4.654 mg/kg |
| Impact on Sewage Treatment | 10 g/l      |

**Calculation method**

Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 1.355 mg/l               | 0.093                             |
| Freshwater sediment         | 5.629 mg/g               | 0.093                             |
| Marine water                | 0.135 mg/l               | 0.093                             |
| Marine sediment             | 0.563 mg/kg              | 0.093                             |
| STP: Sewage Treatment Plant | 13.54 mg/l               | <0.01                             |
| Soil                        | 0.00044 mg/kg            | <0.01                             |

**Derived No Effect Level (DNEL):**

|                                           |                         |
|-------------------------------------------|-------------------------|
| Worker - dermal, long-term - systemic     | 17.9 mg/kg/d            |
| Worker - inhalative, long-term - systemic | 126.6 mg/m <sup>3</sup> |

**Calculation method**

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

| Process category(ies)                                                                    | Exposure route                            | predicted exposure level | Risk characterisation ratio (RCR) |
|------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------|-----------------------------------|
| PROC1 - Use in closed process, no likelihood of exposure                                 | Worker - inhalative, long-term - systemic | 0.022 mg/m <sup>3</sup>  | <0.01                             |
| PROC1 - Use in closed process, no likelihood of exposure                                 | Worker - dermal, long-term - systemic     | 0.0034 mg/kg/d           | <0.01                             |
| PROC1 - Use in closed process, no likelihood of exposure                                 | Worker - combined, long-term - systemic   |                          | <0.01                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure            | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup>  | 0.018                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure            | Worker - dermal, long-term - systemic     | 0.069 mg/kg/d            | <0.01                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure            | Worker - combined, long-term - systemic   |                          | 0.018                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                           | Worker - inhalative, long-term - systemic | 110.9 mg/m <sup>3</sup>  | 0.035                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                           | Worker - dermal, long-term - systemic     | 0.034 mg/kg/d            | <0.01                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                           | Worker - combined, long-term - systemic   |                          | 0.035                             |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises | Worker - inhalative, long-term - systemic | 95.11 mg/m <sup>3</sup>  | 0.03                              |

|                                                                                                                                                                                                  |                                           |                         |       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                                                                                         | Worker - dermal, long-term - systemic     | 0.343 mg/kg/d           | <0.01 |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                                                                                         | Worker - combined, long-term - systemic   |                         | 0.031 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                  | Worker - inhalative, long-term - systemic | 88.77 mg/m <sup>3</sup> | 0.028 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                  | Worker - dermal, long-term - systemic     | 0.069 mg/kg/d           | <0.01 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                  | Worker - combined, long-term - systemic   |                         | 0.028 |
| PROC15 - Use as laboratory reagent                                                                                                                                                               | Worker - inhalative, long-term - systemic | 110.9 mg/m <sup>3</sup> | 0.035 |
| PROC15 - Use as laboratory reagent                                                                                                                                                               | Worker - dermal, long-term - systemic     | 0.017 mg/kg/d           | <0.01 |
| PROC15 - Use as laboratory reagent                                                                                                                                                               | Worker - combined, long-term - systemic   |                         | 0.035 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                    | Worker - inhalative, long-term - systemic | 332.9 mg/m <sup>3</sup> | 0.106 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                    | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                    | Worker - combined, long-term - systemic   |                         | 0.107 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup> | 0.018 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - combined, long-term - systemic   |                         | 0.019 |
| PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                         | Worker - inhalative, long-term - systemic | 0.022 mg/m <sup>3</sup> | <0.01 |
| PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                         | Worker - dermal, long-term - systemic     | 0.0034 mg/kg/d          | <0.01 |
| PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                         | Worker - combined, long-term - systemic   |                         | <0.01 |

|                                                                               |                                           |                         |       |
|-------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
| likelihood of exposure                                                        | - systemic                                |                         |       |
| PROC2 - Use in closed, continuous process with occasional controlled exposure | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup> | 0.018 |
| PROC2 - Use in closed, continuous process with occasional controlled exposure | Worker - dermal, long-term - systemic     | 0.069 mg/kg/d           | <0.01 |
| PROC2 - Use in closed, continuous process with occasional controlled exposure | Worker - combined, long-term - systemic   |                         | 0.018 |

#### Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. <http://www.ecetoc.org/tra>.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** DIMETHOXYMETHANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119664781-31-XXXX  
**CAS No** 109-87-5  
**EC No (EU Index No)** 203-714-2  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Coatings and paints, thinners, paint removers ( Industrial use )  
**Type** Worker  
**Main user group** Industrial uses: Uses of substances as such or in preparations at industrial sites  
**Environmental release category(ies)** ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles  
**Process category(ies)** PROC1 - Use in closed process, no likelihood of exposure  
 PROC2 - Use in closed, continuous process with occasional controlled exposure  
 PROC3 - Use in closed batch process (synthesis or formulation)  
 PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises  
 PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities  
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities  
 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)  
 PROC15 - Use as laboratory reagent  
 PROC28 - Manual maintenance (cleaning and repair) of machinery  
**Product category(ies)** PC11 - Explosives PC40 - Extraction agents  
**Sector(s) of use** SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

#### Amounts used

|       |                       |
|-------|-----------------------|
| Type  | Daily amount per site |
| Value | 4.5                   |
| Units | tonnes                |

|       |                        |
|-------|------------------------|
| Type  | Annual amount per site |
| Value | 90                     |
| Units | t(ons)/year            |

#### Product characteristics

|                                  |        |
|----------------------------------|--------|
| Physical form of product         | Liquid |
| Vapour pressure                  | 40 kPa |
| Temperature associated to vapour | 20 C   |

|          |  |
|----------|--|
| pressure |  |
|----------|--|

**Conditions and measures related to municipal sewage treatment plant**

|                                              |                                         |
|----------------------------------------------|-----------------------------------------|
| Assumed domestic sewage treatment plant flow | 2000 m3/d                               |
| Sludge treatment                             | No application of sewage sludge to soil |

**Risk management measures**

|                                                                                       |                                      |
|---------------------------------------------------------------------------------------|--------------------------------------|
| Technical onsite conditions and measures to reduce or limit discharges, air emissions | Onsite wastewater treatment required |
|---------------------------------------------------------------------------------------|--------------------------------------|

**Conditions and measures related to external treatment of waste for disposal**

|          |                                                                                                          |
|----------|----------------------------------------------------------------------------------------------------------|
| Disposal | External treatment and disposal of waste should comply with applicable local and/or national regulations |
|----------|----------------------------------------------------------------------------------------------------------|

**Control of worker exposure**

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                                                                                         |
| Title                                                                                  | General exposures (closed systems)                                                                                                                                                                                                                               |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC2 - Use in closed, continuous process with occasional controlled exposure                                                                                                                                                    |
| Title                                                                                  | General exposures (closed systems)                                                                                                                                                                                               |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Handle substance within a predominantly closed system provided with extract ventilation                                               |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                    |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC3 - Use in closed batch process (synthesis or formulation)                                                                                                                     |
| Title                                                                                  | Batch process (closed systems)                                                                                                                                                     |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                              |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                  |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Handle substance within a predominantly closed system provided with extract ventilation |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                        |

|                                                                             |                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Organisational measures to prevent /limit releases, dispersion and exposure | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                      | Assumes process temperature up to 25 C                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                                                                                                                                                             |
| Title                                                                                  | Batch process                                                                                                                                                                                                                                                        |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 4 hours                                                                                                                                                                                               |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                    |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Provide extract ventilation to points where emissions occur                                                                                                            |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                     |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                               |

|                                                                                        |                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                                                                                      |
| Title                                                                                  | Process sampling                                                                                                                                                                                                                                                     |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 4 hours                                                                                                                                                                                               |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                    |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Ensure material transfers are under containment or extract ventilation                                                                                                 |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                     |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                               |

|                                                                                        |                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC15 - Use as laboratory reagent                                                                                                                                                                                               |
| Title                                                                                  | Laboratory activities                                                                                                                                                                                                            |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                            |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 1 hour                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Handle in a fume cupboard or under extract ventilation                                                                             |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                           |

|                             |                                                                                                                               |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)       | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities |
| Title                       | Bulk transfers (closed systems)                                                                                               |
| Covers concentrations up to | 100 %                                                                                                                         |

|                                                                                        |                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                    |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Handle in an enclosing hood with exhaust ventilation Efficiency of at least 95%                                                                                        |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                     |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                               |

|                                                                                        |                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                                                                                        |
| Title                                                                                  | Drum/batch transfers                                                                                                                                                                                                                                                 |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                    |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Handle in an enclosing hood with exhaust ventilation Efficiency of at least 95%                                                                                        |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                     |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                               |

|                                                                                        |                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery                                                                     |
| Title                                                                                  | Equipment cleaning and maintenance                                                                                                                                                                                                                                   |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 1 hour                                                                                                                                                                                                |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                    |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Drain down and flush system prior to equipment break-in or maintenance                                                                                                 |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                     |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                               |

|                                                                                        |                                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                                                                                            |
| Title                                                                                  | Storage                                                                                                                                                                                                                                                             |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                               |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                   |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                          |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and                     | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs                                                                                       |

|                                                                                        |                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| exposure                                                                               | in place are being used correctly and OCs followed                                                                                                                                                                               |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                           |
| Process category(ies)                                                                  | PROC2 - Use in closed, continuous process with occasional controlled exposure                                                                                                                                                    |
| Title                                                                                  | Storage                                                                                                                                                                                                                          |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                           |

### Section 3 - Exposure estimation

**Environmental release category(ies) - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles**

#### Predicted No Effect Concentration (PNEC)

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 14.58 mg/l  |
| Freshwater sediment        | 13.14 mg/kg |
| Marine water               | 1.477 mg/l  |
| Marine sediment            | 1.314 mg/kg |
| Soil                       | 4.654 mg/kg |
| Impact on Sewage Treatment | 10 g/l      |

**Calculation method** Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 2.032 mg/l               | 0.139                             |
| Freshwater sediment         | 8.443 mg/g               | 0.139                             |
| Marine water                | 0.203 mg/l               | 0.139                             |
| Marine sediment             | 0.844 mg/kg              | 0.139                             |
| STP: Sewage Treatment Plant | 20.31 mg/l               | <0.01                             |
| Soil                        | 0.00129 mg/kg            | <0.01                             |

#### Derived No Effect Level (DNEL):

|                                           |                         |
|-------------------------------------------|-------------------------|
| Worker - dermal, long-term - systemic     | 17.9 mg/kg/d            |
| Worker - inhalative, long-term - systemic | 126.6 mg/m <sup>3</sup> |

**Calculation method** The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

| Process category(ies)                                    | Exposure route                            | predicted exposure level | Risk characterisation ratio (RCR) |
|----------------------------------------------------------|-------------------------------------------|--------------------------|-----------------------------------|
| PROC1 - Use in closed process, no likelihood of exposure | Worker - inhalative, long-term - systemic | 0.022 mg/m <sup>3</sup>  | <0.01                             |
| PROC1 - Use in closed process, no likelihood of exposure | Worker - dermal, long-term - systemic     | 0.0034 mg/kg/d           | <0.01                             |

|                                                                                                                               |                                           |                         |       |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
| PROC1 - Use in closed process, no likelihood of exposure                                                                      | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                 | Worker - inhalative, long-term - systemic | 5.549 mg/m <sup>3</sup> | <0.01 |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                 | Worker - dermal, long-term - systemic     | 0.069 mg/kg/d           | <0.01 |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                 | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                | Worker - inhalative, long-term - systemic | 11.09 mg/m <sup>3</sup> | <0.01 |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                | Worker - dermal, long-term - systemic     | 0.034 mg/kg/d           | <0.01 |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                      | Worker - inhalative, long-term - systemic | 13.31 mg/m <sup>3</sup> | <0.01 |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                      | Worker - dermal, long-term - systemic     | 0.206 mg/kg/d           | <0.01 |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                      | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)               | Worker - inhalative, long-term - systemic | 26.63 mg/m <sup>3</sup> | <0.01 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)               | Worker - dermal, long-term - systemic     | 0.206 mg/kg/d           | <0.01 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)               | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC15 - Use as laboratory reagent                                                                                            | Worker - inhalative, long-term - systemic | 11.09 mg/m <sup>3</sup> | <0.01 |
| PROC15 - Use as laboratory reagent                                                                                            | Worker - dermal, long-term - systemic     | 0.017 mg/kg/d           | <0.01 |
| PROC15 - Use as laboratory reagent                                                                                            | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - inhalative, long-term - systemic | 16.64 mg/m <sup>3</sup> | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at                      | Worker - inhalative, long-term - systemic | 16.64 mg/m <sup>3</sup> | <0.01 |

|                                                                                                                                                                                                  |                                           |                         |       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
| dedicated facilities                                                                                                                                                                             |                                           |                         |       |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                    | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                    | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - inhalative, long-term - systemic | 11.09 mg/m <sup>3</sup> | <0.01 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - dermal, long-term - systemic     | 0.137 mg/kg/d           | <0.01 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                         | Worker - inhalative, long-term - systemic | 0.022 mg/m <sup>3</sup> | <0.01 |
| PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                         | Worker - dermal, long-term - systemic     | 0.0034 mg/kg/d          | <0.01 |
| PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                         | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                                                                                    | Worker - inhalative, long-term - systemic | 11.09 mg/m <sup>3</sup> | <0.01 |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                                                                                    | Worker - dermal, long-term - systemic     | 0.069 mg/kg/d           | <0.01 |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                                                                                    | Worker - combined, long-term - systemic   |                         | <0.01 |

#### Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. <http://www.ecetoc.org/tra>.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** DIMETHOXYMETHANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119664781-31-XXXX  
**CAS No** 109-87-5  
**EC No (EU Index No)** 203-714-2  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Polymer preparations and compounds ( Industrial use )  
**Type** Worker  
**Main user group** Industrial uses: Uses of substances as such or in preparations at industrial sites  
**Environmental release category(ies)** ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles  
**Process category(ies)** PROC1 - Use in closed process, no likelihood of exposure  
 PROC2 - Use in closed, continuous process with occasional controlled exposure  
 PROC3 - Use in closed batch process (synthesis or formulation)  
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities  
 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)  
 PROC12 - Use of blow agents in manufacture of foam  
**Product category(ies)** PC32 - Polymer preparations and compounds  
**Sector(s) of use** SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

##### Amounts used

|       |                       |
|-------|-----------------------|
| Type  | Daily amount per site |
| Value | 5                     |
| Units | tonnes                |

|       |                        |
|-------|------------------------|
| Type  | Annual amount per site |
| Value | 100                    |
| Units | t(ons)/year            |

##### Product characteristics

|                                           |        |
|-------------------------------------------|--------|
| Physical form of product                  | Liquid |
| Vapour pressure                           | 40 kPa |
| Temperature associated to vapour pressure | 20 C   |

Conditions and measures related to municipal sewage treatment plant

|                                              |                                         |
|----------------------------------------------|-----------------------------------------|
| Assumed domestic sewage treatment plant flow | 2000 m3/d                               |
| Sludge treatment                             | No application of sewage sludge to soil |

**Risk management measures**

|                                                                                       |                                      |
|---------------------------------------------------------------------------------------|--------------------------------------|
| Technical onsite conditions and measures to reduce or limit discharges, air emissions | Onsite wastewater treatment required |
|---------------------------------------------------------------------------------------|--------------------------------------|

**Conditions and measures related to external treatment of waste for disposal**

|          |                                                                                                          |
|----------|----------------------------------------------------------------------------------------------------------|
| Disposal | External treatment and disposal of waste should comply with applicable local and/or national regulations |
|----------|----------------------------------------------------------------------------------------------------------|

**Control of worker exposure**

|                                                                                        |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                                                                                     |
| Title                                                                                  | Bulk transfers (closed systems)                                                                                                                                                                                                                                   |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 4 hours                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                        |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                                                                                   |
| Title                                                                                  | Drum and small package filling                                                                                                                                                                                                                                    |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Local exhaust ventilation - efficiency of at least 90%                                                                                                                 |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

|                                                                                        |                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC1 - Use in closed process, no likelihood of exposure                                                                                                                              |
| Title                                                                                  | Mixing operations (closed systems) Elevated temperature                                                                                                                               |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                 |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                     |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Ensure material transfers are under containment or extract ventilation                     |
| Conditions and measures related to personal protection, hygiene and                    | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin |

|                                                                             |                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| health evaluation                                                           | See Section 8 for information on appropriate personal protective equipment                                                                                                                                                       |
| Organisational measures to prevent /limit releases, dispersion and exposure | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                      | Assumes process temperature up to 60C                                                                                                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC12 - Use of blow agents in manufacture of foam                                                                                                                                                                                                                |
| Title                                                                                  | Tabletting, compression, extrusion or pelletisation                                                                                                                                                                                                               |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Local exhaust ventilation - efficiency of at least 90%                                                                                                                 |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC12 - Use of blow agents in manufacture of foam                                                                                                                                                                                                                |
| Title                                                                                  | Production and use of flexible polyurethane foam Production and use of rigid polyurethane foam                                                                                                                                                                    |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Local exhaust ventilation - efficiency of at least 90%                                                                                                                 |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC3 - Use in closed batch process (synthesis or formulation)                                                                                                                                                                   |
| Title                                                                                  | Use in contained systems                                                                                                                                                                                                         |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of controlled ventilation (5 to 10 air changes per hour) Local exhaust ventilation - efficiency of at least 90%                                                                                          |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                           |

|                                      |                                                                                            |
|--------------------------------------|--------------------------------------------------------------------------------------------|
| Process category(ies)                | PROC2 - Use in closed, continuous process with occasional controlled exposure              |
| Title                                | Storage                                                                                    |
| Covers concentrations up to          | 100 %                                                                                      |
| Use frequency                        | Covers daily exposures up to 8 hours (unless stated differently).                          |
| Technical conditions and measures to | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) |

|                                                                                       |                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| control dispersion from source towards the worker                                     |                                                                                                                                                                                                                                                                   |
| Conditions and measures related to personal protection, hygiene and health evaluation | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure           | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                                                                                     |
| Title                                                                                  | Packaging                                                                                                                                                                                                                                                         |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 4 hours                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Local exhaust ventilation - efficiency of at least 95%                                                                                                                 |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC12 - Use of blow agents in manufacture of foam                                                                                                                                                                                                                |
| Title                                                                                  | Production and use of flexible polyurethane foam Production and use of rigid polyurethane foam Elevated temperature                                                                                                                                               |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of controlled ventilation (5 to 10 air changes per hour)                                                                                                                                                                                  |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 60C                                                                                                                                                                                                                             |

|                                                                                        |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC12 - Use of blow agents in manufacture of foam                                                                                                                                                                                                                |
| Title                                                                                  | Production and use of flexible polyurethane foam Production and use of rigid polyurethane foam                                                                                                                                                                    |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of controlled ventilation (5 to 10 air changes per hour)                                                                                                                                                                                  |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |

|                        |                                       |
|------------------------|---------------------------------------|
| Operational conditions | Assumes process temperature up to 60C |
|------------------------|---------------------------------------|

### Section 3 - Exposure estimation

**Environmental release category(ies) - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles**

#### Predicted No Effect Concentration (PNEC)

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 14.58 mg/l  |
| Freshwater sediment        | 13.14 mg/kg |
| Marine water               | 1.477 mg/l  |
| Marine sediment            | 1.314 mg/kg |
| Soil                       | 4.654 ug/kg |
| Impact on Sewage Treatment | 10 mg/l     |

#### Calculation method Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 2.71 mg/l                | 0.186                             |
| Freshwater sediment         | 11.25 mg/kg              | 0.185                             |
| Marine water                | 1.126 mg/l               | 0.185                             |
| Marine sediment             | 0.000998 mg/kg           | <0.01                             |
| STP: Sewage Treatment Plant | 27.09 mg/l               | <0.01                             |
| Soil                        | 0.099 mg/kg              | 0.028                             |

#### Derived No Effect Level (DNEL):

|                                           |                         |
|-------------------------------------------|-------------------------|
| Worker - dermal, long-term - systemic     | 17.9 mg/kg/d            |
| Worker - inhalative, long-term - systemic | 126.6 mg/m <sup>3</sup> |

#### Calculation method The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

| Process category(ies)                                                                                                         | Exposure route                            | predicted exposure level | Risk characterisation ratio (RCR) |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------|-----------------------------------|
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - inhalative, long-term - systemic | 199.7 mg/m <sup>3</sup>  | 0.063                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - dermal, long-term - systemic     | 0.411 mg/kg/d            | <0.01                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - combined, long-term - systemic   |                          | 0.064                             |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)               | Worker - inhalative, long-term - systemic | 44.38 mg/m <sup>3</sup>  | 0.014                             |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)               | Worker - dermal, long-term - systemic     | 0.343 mg/kg/d            | <0.01                             |

|                                                                                                                               |                                           |                         |       |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)               | Worker - combined, long-term - systemic   |                         | 0.015 |
| PROC1 - Use in closed process, no likelihood of exposure                                                                      | Worker - inhalative, long-term - systemic | 0.022 mg/m <sup>3</sup> | <0.01 |
| PROC1 - Use in closed process, no likelihood of exposure                                                                      | Worker - dermal, long-term - systemic     | 0.034 mg/kg/d           | <0.01 |
| PROC1 - Use in closed process, no likelihood of exposure                                                                      | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC12 - Use of blow agents in manufacture of foam                                                                            | Worker - inhalative, long-term - systemic | 22.19 mg/m <sup>3</sup> | <0.01 |
| PROC12 - Use of blow agents in manufacture of foam                                                                            | Worker - dermal, long-term - systemic     | 0.017 mg/kg/d           | <0.01 |
| PROC12 - Use of blow agents in manufacture of foam                                                                            | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC12 - Use of blow agents in manufacture of foam                                                                            | Worker - inhalative, long-term - systemic | 22.19 mg/m <sup>3</sup> | <0.01 |
| PROC12 - Use of blow agents in manufacture of foam                                                                            | Worker - dermal, long-term - systemic     | 0.017 mg/kg/d           | <0.01 |
| PROC12 - Use of blow agents in manufacture of foam                                                                            | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                | Worker - inhalative, long-term - systemic | 47.55 mg/m <sup>3</sup> | 0.015 |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                | Worker - dermal, long-term - systemic     | 0.034 mg/kg/d           | <0.01 |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                | Worker - combined, long-term - systemic   |                         | 0.015 |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                 | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup> | 0.018 |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                 | Worker - dermal, long-term - systemic     | 0.069 mg/kg/d           | <0.01 |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                 | Worker - combined, long-term - systemic   |                         | 0.018 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - inhalative, long-term - systemic | 16.64 mg/m <sup>3</sup> | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC12 - Use of blow agents in manufacture of foam                                                                            | Worker - inhalative, long-term - systemic | 95.11 mg/m <sup>3</sup> | 0.03  |
| PROC12 - Use of blow agents in manufacture of foam                                                                            | Worker - dermal, long-term - systemic     | 0.017 mg/kg/d           | <0.01 |
| PROC12 - Use of blow agents in manufacture of foam                                                                            | Worker - combined, long-term - systemic   |                         | 0.03  |
| PROC12 - Use of blow agents in manufacture of foam                                                                            | Worker - inhalative, long-term - systemic | 95.11 mg/m <sup>3</sup> | 0.03  |

|                                                    |                                         |               |       |
|----------------------------------------------------|-----------------------------------------|---------------|-------|
| PROC12 - Use of blow agents in manufacture of foam | Worker - dermal, long-term - systemic   | 0.017 mg/kg/d | <0.01 |
| PROC12 - Use of blow agents in manufacture of foam | Worker - combined, long-term - systemic |               | 0.03  |

#### **Section 4 - Guidance to check compliance with the exposure scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. <http://www.ecetoc.org/tra>.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

|                                       |                                                                                           |
|---------------------------------------|-------------------------------------------------------------------------------------------|
| <b>Chemical name</b>                  | DIMETHOXYMETHANE                                                                          |
| <b>Pure substance/mixture</b>         | Substance                                                                                 |
| <b>REACH registration number</b>      | 01-2119664781-31-XXXX                                                                     |
| <b>CAS No</b>                         | 109-87-5                                                                                  |
| <b>EC No (EU Index No)</b>            | 203-714-2                                                                                 |
| <b>Supplier</b>                       | Univar Solutions UK Ltd<br>Aquarius House<br>6 Mid Point Business Park<br>Bradford<br>GBR |
| <b>Non-Emergency Telephone Number</b> | +44 1274 267300 / +44 1274 267306                                                         |
| <b>E-mail address</b>                 | SDS.EMEA@univarsolutions.com                                                              |

### Section 1 - Title

|                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Title</b>                               | Coatings and paints, thinners, paint removers ( Industrial use )                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Type</b>                                | Worker                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Main user group</b>                     | Industrial uses: Uses of substances as such or in preparations at industrial sites                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Environmental release category(ies)</b> | ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles<br>ERC6c - Industrial use of monomers for manufacture of thermoplastics<br>ERC6d - Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <b>Process category(ies)</b>               | PROC1 - Use in closed process, no likelihood of exposure<br>PROC2 - Use in closed, continuous process with occasional controlled exposure<br>PROC3 - Use in closed batch process (synthesis or formulation)<br>PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises<br>PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)<br>PROC7 - Industrial spraying<br>PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities<br>PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities<br>PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)<br>PROC10 - Roller application or brushing<br>PROC13 - Treatment of articles by dipping and pouring<br>PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising<br>PROC15 - Use as laboratory reagent<br>PROC28 - Manual maintenance (cleaning and repair) of machinery |
| <b>Product category(ies)</b>               | PC9a - Coatings and paints, thinners, paint removers                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Sector(s) of use</b>                    | SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

- ERC6c - Industrial use of monomers for manufacture of thermoplastics
- ERC6d - Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers

#### Amounts used

|      |                       |
|------|-----------------------|
| Type | Daily amount per site |
|------|-----------------------|

|       |        |
|-------|--------|
| Value | 3.25   |
| Units | tonnes |

|       |                        |
|-------|------------------------|
| Type  | Annual amount per site |
| Value | 65                     |
| Units | t(ons)/year            |

**Product characteristics**

|                                           |        |
|-------------------------------------------|--------|
| Physical form of product                  | Liquid |
| Vapour pressure                           | 40 kPa |
| Temperature associated to vapour pressure | 20 C   |

**Conditions and measures related to municipal sewage treatment plant**

|                                              |                                         |
|----------------------------------------------|-----------------------------------------|
| Assumed domestic sewage treatment plant flow | 2000 m3/d                               |
| Sludge treatment                             | No application of sewage sludge to soil |

**Risk management measures**

|                                                                                       |                                      |
|---------------------------------------------------------------------------------------|--------------------------------------|
| Technical onsite conditions and measures to reduce or limit discharges, air emissions | Onsite wastewater treatment required |
|---------------------------------------------------------------------------------------|--------------------------------------|

**Conditions and measures related to external treatment of waste for disposal**

|          |                                                                                                          |
|----------|----------------------------------------------------------------------------------------------------------|
| Disposal | External treatment and disposal of waste should comply with applicable local and/or national regulations |
|----------|----------------------------------------------------------------------------------------------------------|

**Control of worker exposure**

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                                                                                         |
| Title                                                                                  | General exposures (closed systems)                                                                                                                                                                                                                               |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC2 - Use in closed, continuous process with occasional controlled exposure                                                                                                                                                    |
| Title                                                                                  | General exposures (closed systems) Process sampling                                                                                                                                                                              |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |

|                                                                                        |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |
| Process category(ies)                                                                  | PROC2 - Use in closed, continuous process with occasional controlled exposure                                                                                                                                                                                     |
| Title                                                                                  | Film formation Elevated temperature                                                                                                                                                                                                                               |
| Covers concentrations up to                                                            | 25 %                                                                                                                                                                                                                                                              |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 4 hours                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Handle substance within a predominantly closed system provided with extract ventilation                                                                                |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                                                       |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Elevated temperature                                                                                                                                                                                                                                              |
| Process category(ies)                                                                  | PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                                                                                                                                                          |
| Title                                                                                  | Film formation                                                                                                                                                                                                                                                    |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of controlled ventilation (5 to 10 air changes per hour) Provide extract ventilation to points where emissions occur                                                                                                                      |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |
| Process category(ies)                                                                  | PROC3 - Use in closed batch process (synthesis or formulation)                                                                                                                                                                                                    |
| Title                                                                                  | Mixing operations (closed systems)                                                                                                                                                                                                                                |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Ensure material transfers are under containment or extract ventilation                                                                                                 |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                                                       |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |
| Process category(ies)                                                                  | PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)                                                                                                                               |
| Title                                                                                  | Mixing operations (open systems)                                                                                                                                                                                                                                  |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of controlled ventilation (5 to 10 air changes per hour) Provide extract ventilation to points where emissions occur                                                                                                                      |
| Conditions and measures related to                                                     | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity                                                                                                                                                                         |

|                                                                             |                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| personal protection, hygiene and health evaluation                          | training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment                                                       |
| Organisational measures to prevent /limit releases, dispersion and exposure | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                      | Assumes process temperature up to 25 C                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC7 - Industrial spraying                                                                                                                                                                                                      |
| Title                                                                                  | Spraying                                                                                                                                                                                                                         |
| Covers concentrations up to                                                            | 5 %                                                                                                                                                                                                                              |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Carry out in a vented booth or extracted enclosure                                                                                 |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC7 - Industrial spraying                                                                                                                                                                                                      |
| Title                                                                                  | Manual spraying                                                                                                                                                                                                                  |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                            |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 4 hours                                                                                                                                                           |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Carry out in a vented booth provided with laminar airflow                                                                          |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities                                                                                                                                    |
| Title                                                                                  | Material transfers                                                                                                                                                                                                                                                   |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                    |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Provide extract ventilation to points where emissions occur                                                                                                            |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                     |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                               |

|                       |                                                                                                                               |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies) | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities |
| Title                 | Material transfers                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                      |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                          |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Provide extract ventilation to points where emissions occur                                                                                                                  |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training<br>Use suitable eye protection<br>Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately<br>Clean equipment and the work area every day<br>Regular inspection and maintenance of equipment and machines<br>Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                                     |

|                                                                                        |                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC10 - Roller application or brushing                                                                                                                                                                                                                                    |
| Title                                                                                  | Roller, spreader, flow application                                                                                                                                                                                                                                         |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                      |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                          |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of controlled ventilation (5 to 10 air changes per hour)<br>Provide extract ventilation to points where emissions occur                                                                                                                            |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training<br>Use suitable eye protection<br>Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately<br>Clean equipment and the work area every day<br>Regular inspection and maintenance of equipment and machines<br>Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                                     |

|                                                                                        |                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC10 - Roller application or brushing                                                                                                                                                                                                                                    |
| Title                                                                                  | Roller, spreader, flow application Automated task                                                                                                                                                                                                                          |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                      |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                          |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of controlled ventilation (5 to 10 air changes per hour)<br>Provide extract ventilation to points where emissions occur                                                                                                                            |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training<br>Use suitable eye protection<br>Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately<br>Clean equipment and the work area every day<br>Regular inspection and maintenance of equipment and machines<br>Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                                     |

|                                                                                        |                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC13 - Treatment of articles by dipping and pouring                                                                                                                                                                                                                      |
| Title                                                                                  | Treatment of articles by dipping and pouring                                                                                                                                                                                                                               |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                      |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                          |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Provide extract ventilation to points where emissions occur                                                                                                                  |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training<br>Use suitable eye protection<br>Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately<br>Clean equipment and the work area every day<br>Regular inspection and maintenance of equipment and machines<br>Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                                     |

|                                                                                        |                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC15 - Use as laboratory reagent                                                                                                                                                                                               |
| Title                                                                                  | Laboratory activities                                                                                                                                                                                                            |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                            |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 1 hour                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery                                                                  |
| Title                                                                                  | Equipment cleaning and maintenance                                                                                                                                                                                                                                |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of controlled ventilation (5 to 10 air changes per hour) Drain down and flush system prior to equipment break-in or maintenance                                                                                                           |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                                                                                         |
| Title                                                                                  | Storage                                                                                                                                                                                                                                                          |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                  |
| Title                                                                                  | Drum/batch transfers                                                                                                                                                             |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Fill containers/cans at dedicated fill points supplied with local extract ventilation |

|                                                                                       |                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Conditions and measures related to personal protection, hygiene and health evaluation | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure           | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising                                                                                                                                                                 |
| Title                                                                                  | Tabletting, compression, extrusion or pelletisation                                                                                                                                                                                                               |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Provide extract ventilation to points where emissions occur                                                                                                            |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

### Section 3 - Exposure estimation

**Environmental release category(ies) - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles**

**- ERC6c - Industrial use of monomers for manufacture of thermoplastics**

**- ERC6d - Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers**

**Predicted No Effect Concentration (PNEC)**

|                                   |             |
|-----------------------------------|-------------|
| <b>Freshwater</b>                 | 14.58 mg/l  |
| <b>Freshwater sediment</b>        | 13.14 mg/kg |
| <b>Marine water</b>               | 1.477 mg/l  |
| <b>Marine sediment</b>            | 1.314 mg/kg |
| <b>Soil</b>                       | 4.654 mg/kg |
| <b>Impact on Sewage Treatment</b> | 10 mg/l     |

**Calculation method** Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 7.338 mg/l               | 0.503                             |
| Freshwater sediment         | 30.48 mg/kg              | 0.502                             |
| Marine water                | 0.734 mg/l               | 0.503                             |
| Marine sediment             | 3.049 mg/kg              | 0.502                             |
| STP: Sewage Treatment Plant | 73.37 mg/l               | <0.01                             |
| Soil                        | 0.195 mg/kg              | 0.055                             |

**Derived No Effect Level (DNEL):**

|                                                  |                         |
|--------------------------------------------------|-------------------------|
| <b>Worker - dermal, long-term - systemic</b>     | 17.9 mg/kg/d            |
| <b>Worker - inhalative, long-term - systemic</b> | 126.6 mg/m <sup>3</sup> |

| <b>Calculation method</b>                                                                                                           | The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated |                          |                                   |
|-------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------|--------------------------|-----------------------------------|
| Process category(ies)                                                                                                               | Exposure route                                                                               | predicted exposure level | Risk characterisation ratio (RCR) |
| PROC1 - Use in closed process, no likelihood of exposure                                                                            | Worker - inhalative, long-term - systemic                                                    | 0.022 mg/m <sup>3</sup>  | <0.01                             |
| PROC1 - Use in closed process, no likelihood of exposure                                                                            | Worker - dermal, long-term - systemic                                                        | 0.0034 mg/kg/d           | <0.01                             |
| PROC1 - Use in closed process, no likelihood of exposure                                                                            | Worker - combined, long-term - systemic                                                      |                          | <0.01                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                       | Worker - inhalative, long-term - systemic                                                    | 55.48 mg/m <sup>3</sup>  | 0.018                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                       | Worker - dermal, long-term - systemic                                                        | 0.069 mg/kg/d            | <0.01                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                       | Worker - combined, long-term - systemic                                                      |                          | 0.018                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                       | Worker - inhalative, long-term - systemic                                                    | 5.549 mg/m <sup>3</sup>  | 0.728                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                       | Worker - dermal, long-term - systemic                                                        | 0.025 mg/kg/d            | <0.01                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                       | Worker - combined, long-term - systemic                                                      |                          | <0.01                             |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                            | Worker - inhalative, long-term - systemic                                                    | 9.512 mg/m <sup>3</sup>  | <0.01                             |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                            | Worker - dermal, long-term - systemic                                                        | 0.343 mg/kg/d            | <0.01                             |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                            | Worker - combined, long-term - systemic                                                      |                          | <0.01                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                      | Worker - inhalative, long-term - systemic                                                    | 11.09 mg/m <sup>3</sup>  | <0.01                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                      | Worker - dermal, long-term - systemic                                                        | 0.034 mg/kg/d            | <0.01                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                      | Worker - combined, long-term - systemic                                                      |                          | <0.01                             |
| PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) | Worker - inhalative, long-term - systemic                                                    | 23.77 mg/m <sup>3</sup>  | <0.01                             |
| PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) | Worker - dermal, long-term - systemic                                                        | 0.686 mg/kg/d            | <0.01                             |
| PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) | Worker - combined, long-term - systemic                                                      |                          | <0.01                             |
| PROC7 - Industrial spraying                                                                                                         | Worker - inhalative, long-term - systemic                                                    | 55.48 mg/m <sup>3</sup>  | 0.018                             |

|                                                                                                                                   |                                           |                         |       |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
| PROC7 - Industrial spraying                                                                                                       | Worker - dermal, long-term - systemic     | 2.143 mg/kg/d           | <0.01 |
| PROC7 - Industrial spraying                                                                                                       | Worker - combined, long-term - systemic   |                         | 0.022 |
| PROC7 - Industrial spraying                                                                                                       | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup> | 0.018 |
| PROC7 - Industrial spraying                                                                                                       | Worker - dermal, long-term - systemic     | 2.143 mg/kg/d           | <0.01 |
| PROC7 - Industrial spraying                                                                                                       | Worker - combined, long-term - systemic   |                         | 0.543 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup> | 0.018 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - combined, long-term - systemic   |                         | 0.019 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - inhalative, long-term - systemic | 16.64 mg/m <sup>3</sup> | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC10 - Roller application or brushing                                                                                           | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup> | 0.018 |
| PROC10 - Roller application or brushing                                                                                           | Worker - dermal, long-term - systemic     | 1.372 mg/kg/d           | <0.01 |
| PROC10 - Roller application or brushing                                                                                           | Worker - combined, long-term - systemic   |                         | 0.021 |
| PROC10 - Roller application or brushing                                                                                           | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup> | 0.018 |
| PROC10 - Roller application or brushing                                                                                           | Worker - dermal, long-term - systemic     | 1.372 mg/kg/d           | <0.01 |
| PROC10 - Roller application or brushing                                                                                           | Worker - combined, long-term - systemic   |                         | 0.021 |
| PROC13 - Treatment of articles by dipping and pouring                                                                             | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup> | 0.809 |
| PROC13 - Treatment of articles by dipping and pouring                                                                             | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC13 - Treatment of articles by dipping and pouring                                                                             | Worker - combined, long-term - systemic   |                         | 0.019 |
| PROC15 - Use as laboratory reagent                                                                                                | Worker - inhalative, long-term - systemic | 110.9 mg/m <sup>3</sup> | 0.035 |
| PROC15 - Use as laboratory reagent                                                                                                | Worker - dermal, long-term - systemic     | 0.017 mg/kg/d           | <0.01 |
| PROC15 - Use as laboratory reagent                                                                                                | Worker - combined, long-term              |                         | 0.035 |

|                                                                                                                                                                                                  |                                           |                         |       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
|                                                                                                                                                                                                  | - systemic                                |                         |       |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - inhalative, long-term - systemic | 23.77 mg/m <sup>3</sup> | <0.01 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                         | Worker - inhalative, long-term - systemic | 0.022 mg/m <sup>3</sup> | <0.01 |
| PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                         | Worker - dermal, long-term - systemic     | 0.0034 mg/kg/d          | <0.01 |
| PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                         | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                  | Worker - inhalative, long-term - systemic | 44.38 mg/m <sup>3</sup> | 0.014 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                  | Worker - dermal, long-term - systemic     | 0.343 mg/kg/d           | <0.01 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                  | Worker - combined, long-term - systemic   |                         | 0.015 |
| PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising                                                                                                | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup> | 0.018 |
| PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising                                                                                                | Worker - dermal, long-term - systemic     | 0.172 mg/kg/d           | <0.01 |
| PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising                                                                                                | Worker - combined, long-term - systemic   |                         | 0.018 |

#### **Section 4 - Guidance to check compliance with the exposure scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. <http://www.ecetoc.org/tra>.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** DIMETHOXYMETHANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119664781-31-XXXX  
**CAS No** 109-87-5  
**EC No (EU Index No)** 203-714-2  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Washing and cleaning products  
**Type** Worker  
**Main user group** Industrial uses: Uses of substances as such or in preparations at industrial sites  
**Environmental release category(ies)** ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles  
**Specific Environmental Release Category** ESVOC SpERC 4.4a.v3  
**Process category(ies)** PROC1 - Use in closed process, no likelihood of exposure  
 PROC2 - Use in closed, continuous process with occasional controlled exposure  
 PROC3 - Use in closed batch process (synthesis or formulation)  
 PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises  
 PROC7 - Industrial spraying  
 PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities  
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities  
 PROC10 - Roller application or brushing  
 PROC13 - Treatment of articles by dipping and pouring  
 PROC28 - Manual maintenance (cleaning and repair) of machinery  
**Sector(s) of use** SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

**Specific Environmental Release Category** - ESVOC SpERC 4.4a.v3

#### Amounts used

|       |                       |
|-------|-----------------------|
| Type  | Daily amount per site |
| Value | 6                     |
| Units | tonnes                |

|       |                        |
|-------|------------------------|
| Type  | Annual amount per site |
| Value | 120                    |
| Units | t(ons)/year            |

#### Product characteristics

|                          |        |
|--------------------------|--------|
| Physical form of product | Liquid |
|--------------------------|--------|

|                                           |        |
|-------------------------------------------|--------|
| Vapour pressure                           | 40 kPa |
| Temperature associated to vapour pressure | 20 C   |

**Conditions and measures related to municipal sewage treatment plant**

|                                              |                                         |
|----------------------------------------------|-----------------------------------------|
| Assumed domestic sewage treatment plant flow | 2000 m3/d                               |
| Sludge treatment                             | No application of sewage sludge to soil |

**Risk management measures**

|                                                                                       |                                      |
|---------------------------------------------------------------------------------------|--------------------------------------|
| Technical onsite conditions and measures to reduce or limit discharges, air emissions | Onsite wastewater treatment required |
|---------------------------------------------------------------------------------------|--------------------------------------|

**Conditions and measures related to external treatment of waste for disposal**

|          |                                                                                                          |
|----------|----------------------------------------------------------------------------------------------------------|
| Disposal | External treatment and disposal of waste should comply with applicable local and/or national regulations |
|----------|----------------------------------------------------------------------------------------------------------|

**Control of worker exposure**

|                                                                                        |                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities                                                                                                                                          |
| Title                                                                                  | Bulk transfers                                                                                                                                                                                                                                                             |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                      |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                          |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Ensure material transfers are under containment or extract ventilation                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training<br>Use suitable eye protection<br>Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately<br>Clean equipment and the work area every day<br>Regular inspection and maintenance of equipment and machines<br>Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                                     |

|                                                                                        |                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                                                                                              |
| Title                                                                                  | Bulk transfers (closed systems)                                                                                                                                                                                                                                            |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                      |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                          |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Ensure material transfers are under containment or extract ventilation                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training<br>Use suitable eye protection<br>Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately<br>Clean equipment and the work area every day<br>Regular inspection and maintenance of equipment and machines<br>Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                                     |

|                                      |                                                                                            |
|--------------------------------------|--------------------------------------------------------------------------------------------|
| Process category(ies)                | PROC2 - Use in closed, continuous process with occasional controlled exposure              |
| Title                                | Automated process with (semi) closed systems                                               |
| Covers concentrations up to          | 100 %                                                                                      |
| Use frequency                        | Covers daily exposures up to 8 hours (unless stated differently).                          |
| Technical conditions and measures to | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) |

|                                                                                       |                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| control dispersion from source towards the worker                                     |                                                                                                                                                                                                                                  |
| Conditions and measures related to personal protection, hygiene and health evaluation | Use suitable eye protection                                                                                                                                                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure           | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                                | Assumes process temperature up to 25 C                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC3 - Use in closed batch process (synthesis or formulation)                                                                                                                                                                   |
| Title                                                                                  | Automated process with (semi) closed systems Drum/batch transfers                                                                                                                                                                |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                            |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 1 hour                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC2 - Use in closed, continuous process with occasional controlled exposure                                                                                                                                                    |
| Title                                                                                  | Washing and cleaning products (closed systems)                                                                                                                                                                                   |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                                                                                     |
| Title                                                                                  | Filling/preparation of equipment from drums or containers.                                                                                                                                                                                                        |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                        |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

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|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                                                                                                                                                          |
| Title                                                                                  | Batch process ( Elevated temperature )                                                                                                                                                                                                                            |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of controlled ventilation (5 to 10 air changes per hour) Local exhaust ventilation - efficiency of at least 90%                                                                                                                           |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Elevated temperature                                                                                                                                                                                                                                              |

|                                                                                        |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC13 - Treatment of articles by dipping and pouring                                                                                                                                                                                                             |
| Title                                                                                  | Treatment of articles by dipping and pouring                                                                                                                                                                                                                      |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Provide extract ventilation to points where emissions occur                                                                                                            |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC7 - Industrial spraying                                                                                                                                                                                                                                       |
| Title                                                                                  | Spraying                                                                                                                                                                                                                                                          |
| Covers concentrations up to                                                            | 1 %                                                                                                                                                                                                                                                               |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of controlled ventilation (5 to 10 air changes per hour)                                                                                                                                                                                  |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

|                                                                                        |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC10 - Roller application or brushing                                                                                                                                                                                                                           |
| Title                                                                                  | Surface cleaning                                                                                                                                                                                                                                                  |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of controlled ventilation (5 to 10 air changes per hour)                                                                                                                                                                                  |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and                     | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs                                                                                     |

|                                                                                        |                                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| exposure                                                                               | in place are being used correctly and OCs followed                                                                                                                                                                                                                |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |
| Process category(ies)                                                                  | PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery                                                                  |
| Title                                                                                  | Equipment cleaning and maintenance                                                                                                                                                                                                                                |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Drain down and flush system prior to equipment break-in or maintenance                                                                                                 |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |
| Process category(ies)                                                                  | PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                                                                                          |
| Title                                                                                  | Storage                                                                                                                                                                                                                                                           |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                        |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment  |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

### Section 3 - Exposure estimation

**Environmental release category(ies) - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles**

**Specific Environmental Release Category - ESVOC SpERC 4.4a.v3**

#### Predicted No Effect Concentration (PNEC)

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 14.58 mg/l  |
| Freshwater sediment        | 13.14 mg/kg |
| Marine water               | 1.477 mg/l  |
| Marine sediment            | 1.314 mg/kg |
| Soil                       | 4.654 mg/kg |
| Impact on Sewage Treatment | 10 mg/l     |

**Calculation method** Used EUSES model

| Environment         | predicted exposure level | Risk characterisation ratio (RCR) |
|---------------------|--------------------------|-----------------------------------|
| Freshwater          | 0.027 mg/l               | <0.01                             |
| Freshwater sediment | 0.114 mg/kg              | <0.01                             |

|                             |              |       |
|-----------------------------|--------------|-------|
| Marine water                | 0.00274 mg/l | <0.01 |
| Marine sediment             | 0.011 mg/kg  | <0.01 |
| STP: Sewage Treatment Plant | 0.271 mg/l   | <0.01 |
| Soil                        | 0.09 mg/kg   | <0.01 |

**Derived No Effect Level (DNEL):**

**Worker - dermal, long-term - systemic**

17.9 mg/kg/d

**Worker - inhalative, long-term - systemic**

126.6 mg/m<sup>3</sup>

**Calculation method**

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

| Process category(ies)                                                                                                             | Exposure route                            | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------|-----------------------------------|
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup>  | 0.018                             |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d            | <0.01                             |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - combined, long-term - systemic   |                          | 0.019                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - inhalative, long-term - systemic | 16.64 mg/m <sup>3</sup>  | <0.01                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d            | <0.01                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - combined, long-term - systemic   |                          | <0.01                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                     | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup>  | 0.018                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                     | Worker - dermal, long-term - systemic     | 0.069 mg/kg/d            | <0.01                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                     | Worker - combined, long-term - systemic   |                          | 0.018                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                    | Worker - inhalative, long-term - systemic | 110.9 mg/m <sup>3</sup>  | 0.035                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                    | Worker - dermal, long-term - systemic     | 0.034 mg/kg/d            | <0.01                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                    | Worker - combined, long-term - systemic   |                          | 0.035                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                     | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup>  | 0.018                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                     | Worker - dermal, long-term - systemic     | 0.069 mg/kg/d            | <0.01                             |

|                                                                                                                                                                                                  |                                           |                         |       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
| process with occasional controlled exposure                                                                                                                                                      | systemic                                  |                         |       |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                                                                                    | Worker - combined, long-term - systemic   |                         | 0.018 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                    | Worker - inhalative, long-term - systemic | 332.9 mg/m <sup>3</sup> | 0.106 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                    | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                    | Worker - combined, long-term - systemic   |                         | 0.107 |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                                                                                         | Worker - inhalative, long-term - systemic | 95.11 mg/m <sup>3</sup> | 0.03  |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                                                                                         | Worker - dermal, long-term - systemic     | 0.343 mg/kg/d           | <0.01 |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                                                                                         | Worker - combined, long-term - systemic   |                         | 0.031 |
| PROC13 - Treatment of articles by dipping and pouring                                                                                                                                            | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup> | 0.018 |
| PROC13 - Treatment of articles by dipping and pouring                                                                                                                                            | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC13 - Treatment of articles by dipping and pouring                                                                                                                                            | Worker - combined, long-term - systemic   |                         | 0.19  |
| PROC7 - Industrial spraying                                                                                                                                                                      | Worker - inhalative, long-term - systemic | 47.55 mg/m <sup>3</sup> | 0.015 |
| PROC7 - Industrial spraying                                                                                                                                                                      | Worker - dermal, long-term - systemic     | 0.214 mg/kg/d           | <0.01 |
| PROC7 - Industrial spraying                                                                                                                                                                      | Worker - combined, long-term - systemic   |                         | 0.016 |
| PROC10 - Roller application or brushing                                                                                                                                                          | Worker - inhalative, long-term - systemic | 237.7 mg/m <sup>3</sup> | 0.075 |
| PROC10 - Roller application or brushing                                                                                                                                                          | Worker - dermal, long-term - systemic     | 1.372 mg/kg/d           | <0.01 |
| PROC10 - Roller application or brushing                                                                                                                                                          | Worker - combined, long-term - systemic   |                         | 0.078 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup> | 0.018 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC8a - Transfer of substance or                                                                                                                                                                | Worker - combined, long-term              |                         | 0.019 |

|                                                                                                                                                                |                                           |                         |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
| preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | - systemic                                |                         |       |
| PROC1 - Use in closed process, no likelihood of exposure                                                                                                       | Worker - inhalative, long-term - systemic | 0.022 mg/m <sup>3</sup> | <0.01 |
| PROC1 - Use in closed process, no likelihood of exposure                                                                                                       | Worker - dermal, long-term - systemic     | 0.0034 mg/kg/d          | <0.01 |
| PROC1 - Use in closed process, no likelihood of exposure                                                                                                       | Worker - combined, long-term - systemic   |                         | <0.01 |

#### Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. <http://www.ecetoc.org/tra>.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** DIMETHOXYMETHANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119664781-31-XXXX  
**CAS No** 109-87-5  
**EC No (EU Index No)** 203-714-2  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Lubricants, greases, release products ( Industrial use )  
**Type** Worker  
**Main user group** Industrial uses: Uses of substances as such or in preparations at industrial sites  
**Environmental release category(ies)** ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles  
 ERC7 - Industrial use of substances in closed systems  
**Specific Environmental Release Category** ESVOC SpERC 4.6a.v2  
 ESVOC SpERC 7.13a.v2  
**Process category(ies)** PROC1 - Use in closed process, no likelihood of exposure  
 PROC2 - Use in closed, continuous process with occasional controlled exposure  
 PROC3 - Use in closed batch process (synthesis or formulation)  
 PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises  
 PROC7 - Industrial spraying  
 PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities  
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities  
 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)  
 PROC10 - Roller application or brushing  
 PROC13 - Treatment of articles by dipping and pouring  
 PROC28 - Manual maintenance (cleaning and repair) of machinery  
**Product category(ies)** PC24 - Lubricants, greases, release products  
**Sector(s) of use** SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles  
 - ERC7 - Industrial use of substances in closed systems  
**Specific Environmental Release Category** - ESVOC SpERC 4.6a.v2  
- ESVOC SpERC 7.13a.v2

#### Amounts used

|       |                       |
|-------|-----------------------|
| Type  | Daily amount per site |
| Value | 0.75                  |
| Units | tonnes                |

|      |                        |
|------|------------------------|
| Type | Annual amount per site |
|------|------------------------|

|       |             |
|-------|-------------|
| Value | 15          |
| Units | t(ons)/year |

**Product characteristics**

|                                           |        |
|-------------------------------------------|--------|
| Physical form of product                  | Liquid |
| Vapour pressure                           | 40 kPa |
| Temperature associated to vapour pressure | 20 C   |

**Conditions and measures related to municipal sewage treatment plant**

|                                              |                                         |
|----------------------------------------------|-----------------------------------------|
| Assumed domestic sewage treatment plant flow | 2000 m3/d                               |
| Sludge treatment                             | No application of sewage sludge to soil |

**Conditions and measures related to external treatment of waste for disposal**

|                         |                                                                                                          |
|-------------------------|----------------------------------------------------------------------------------------------------------|
| Disposal                | External treatment and disposal of waste should comply with applicable local and/or national regulations |
| Waste treatment methods | Aerobic biological treatment                                                                             |

**Control of worker exposure**

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                                                                                         |
| Title                                                                                  | General exposures (closed systems)                                                                                                                                                                                                                               |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC2 - Use in closed, continuous process with occasional controlled exposure                                                                                                                                                                                    |
| Title                                                                                  | General exposures (closed systems) Process sampling                                                                                                                                                                                                              |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                                                             |                                                                                            |
|-----------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|
| Process category(ies)                                                       | PROC3 - Use in closed batch process (synthesis or formulation)                             |
| Title                                                                       | General exposures (closed systems) Batch process                                           |
| Covers concentrations up to                                                 | 100 %                                                                                      |
| Use frequency                                                               | Covers daily exposures up to 8 hours (unless stated differently).                          |
| Technical conditions and measures to control dispersion from source towards | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) |

|                                                                                       |                                                                                                                                                                                                                                                                   |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| the worker                                                                            |                                                                                                                                                                                                                                                                   |
| Conditions and measures related to personal protection, hygiene and health evaluation | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure           | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

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|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                                                                                                                                                          |
| Title                                                                                  | General exposures (open systems)                                                                                                                                                                                                                                  |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of controlled ventilation (5 to 10 air changes per hour) Local exhaust ventilation - efficiency of at least 90%                                                                                                                           |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

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|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                                                                                     |
| Title                                                                                  | Bulk transfers                                                                                                                                                                                                                                                    |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                        |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

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|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities                                                                                                                                 |
| Title                                                                                  | Filling/preparation of equipment from drums or containers.                                                                                                                                                                                                        |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 4 hours                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                        |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

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|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                                                                                     |
| Title                                                                                  | Filling/preparation of equipment from drums or containers.                                                                                                                                                                                                        |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 4 hours                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                        |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

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|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                                                                                   |
| Title                                                                                  | Filling/preparation of equipment from drums or containers.                                                                                                                                                                                                        |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                        |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

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|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC18 - Greasing at high energy conditions                                                                                                                                                                                                                       |
| Title                                                                                  | Lubrication at high energy conditions and in partly open process                                                                                                                                                                                                  |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Local exhaust ventilation - efficiency of at least 90%                                                                                                              |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

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|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC10 - Roller application or brushing                                                                                                                                                |
| Title                                                                                  | Roller, spreader, flow application                                                                                                                                                     |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                  |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                      |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of controlled ventilation (5 to 10 air changes per hour)                                                                                                       |
| Conditions and measures related to personal protection, hygiene and                    | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin |

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| health evaluation                                                           | See Section 8 for information on appropriate personal protective equipment                                                                                                                                                       |
| Organisational measures to prevent /limit releases, dispersion and exposure | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                      | Assumes process temperature up to 25 C                                                                                                                                                                                           |

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|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC13 - Treatment of articles by dipping and pouring                                                                                                                                                                                                             |
| Title                                                                                  | Treatment of articles by dipping and pouring                                                                                                                                                                                                                      |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Local exhaust ventilation - efficiency of at least 90%                                                                                                                 |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

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|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC7 - Industrial spraying                                                                                                                                                                                                      |
| Title                                                                                  | Spraying                                                                                                                                                                                                                         |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Local exhaust ventilation - efficiency of at least 95%                                                                                |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                           |

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|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                                                                                     |
| Title                                                                                  | Equipment cleaning and maintenance                                                                                                                                                                                                                                |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 4 hours                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                        |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

|                             |                                                                                                                               |
|-----------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)       | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities |
| Title                       | Equipment cleaning and maintenance Elevated temperature                                                                       |
| Covers concentrations up to | 100 %                                                                                                                         |

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|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 4 hours                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                        |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 50 C                                                                                                                                                                                                                            |

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|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery                                                                  |
| Title                                                                                  | Equipment cleaning and maintenance                                                                                                                                                                                                                                |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 4 hours                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                        |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

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|----------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                                                                                   |
| Title                                                                                  | Re-manufacture of reject articles                                                                                                                                                                                                                                 |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                             |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                 |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                        |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                            |

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|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                                                                                         |
| Title                                                                                  | Storage                                                                                                                                                                                                                                                          |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |

|                                                                             |                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Organisational measures to prevent /limit releases, dispersion and exposure | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Operational conditions                                                      | Assumes process temperature up to 25 C                                                                                                                                                                                           |

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|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC2 - Use in closed, continuous process with occasional controlled exposure                                                                                                                                                                                    |
| Title                                                                                  | Storage                                                                                                                                                                                                                                                          |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

### Section 3 - Exposure estimation

**Environmental release category(ies) - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles**

**- ERC7 - Industrial use of substances in closed systems**

**Specific Environmental Release Category - ESVOC SpERC 4.6a.v2**

**- ESVOC SpERC 7.13a.v2**

**Predicted No Effect Concentration (PNEC)**

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 14.58 mg/l  |
| Freshwater sediment        | 13.14 mg/kg |
| Marine water               | 1.477 mg/l  |
| Marine sediment            | 1.314 mg/kg |
| Soil                       | 4.654 mg/kg |
| Impact on Sewage Treatment | 10 mg/l     |

**Calculation method** Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 0.034 mg/l               | <0.01                             |
| Freshwater sediment         | 0.142 mg/kg              | <0.01                             |
| Marine water                | 0.0034 mg/l              | <0.01                             |
| Marine sediment             | 0.014 mg/kg              | <0.01                             |
| STP: Sewage Treatment Plant | 0.339 mg/l               | <0.01                             |
| Soil                        | 0.0000467 mg/kg          | <0.01                             |

**Derived No Effect Level (DNEL):**

|                                           |                         |
|-------------------------------------------|-------------------------|
| Worker - dermal, long-term - systemic     | 17.9 mg/kg/d            |
| Worker - inhalative, long-term - systemic | 126.6 mg/m <sup>3</sup> |

**Calculation method** The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

| Process category(ies)                                                                                                             | Exposure route                            | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------|-----------------------------------|
| PROC1 - Use in closed process, no likelihood of exposure                                                                          | Worker - inhalative, long-term - systemic | 0.022 mg/m <sup>3</sup>  | <0.01                             |
| PROC1 - Use in closed process, no likelihood of exposure                                                                          | Worker - dermal, long-term - systemic     | 0.0034 mg/kg/d           | <0.01                             |
| PROC1 - Use in closed process, no likelihood of exposure                                                                          | Worker - combined, long-term - systemic   |                          | <0.01                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                     | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup>  | 0.018                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                     | Worker - dermal, long-term - systemic     | 0.069 mg/kg/d            | <0.01                             |
| PROC2 - Use in closed, continuous process with occasional controlled exposure                                                     | Worker - combined, long-term - systemic   |                          | 0.018                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                    | Worker - inhalative, long-term - systemic | 110.9 mg/m <sup>3</sup>  | 0.035                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                    | Worker - dermal, long-term - systemic     | 0.034 mg/kg/d            | <0.01                             |
| PROC3 - Use in closed batch process (synthesis or formulation)                                                                    | Worker - combined, long-term - systemic   |                          | 0.035                             |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                          | Worker - inhalative, long-term - systemic | 22.19 mg/m <sup>3</sup>  | <0.01                             |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                          | Worker - dermal, long-term - systemic     | 0.343 mg/kg/d            | <0.01                             |
| PROC4 - Use in batch and other process (synthesis) where opportunity for exposure arises                                          | Worker - combined, long-term - systemic   |                          | <0.01                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - inhalative, long-term - systemic | 332.9 mg/m <sup>3</sup>  | 0.106                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d            | <0.01                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - combined, long-term - systemic   |                          | 0.107                             |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - inhalative, long-term - systemic | 332.9 mg/m <sup>3</sup>  | 0.106                             |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - dermal, long-term - systemic     | 0.411 mg/kg/d            | <0.01                             |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - combined, long-term - systemic   |                          | 0.106                             |
| PROC8b - Transfer of substance or preparation (charging/discharging)                                                              | Worker - inhalative, long-term - systemic | 199.7 mg/m <sup>3</sup>  | 0.063                             |

|                                                                                                                               |                                           |                         |       |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
| from/to vessels/large containers at dedicated facilities                                                                      |                                           |                         |       |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - dermal, long-term - systemic     | 0.411 mg/kg/d           | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - combined, long-term - systemic   |                         | 0.064 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)               | Worker - inhalative, long-term - systemic | 443.8 mg/m <sup>3</sup> | 0.141 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)               | Worker - dermal, long-term - systemic     | 0.343 mg/kg/d           | <0.01 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)               | Worker - combined, long-term - systemic   |                         | 0.141 |
| PROC18 - Greasing at high energy conditions                                                                                   | Worker - inhalative, long-term - systemic | 22.19 mg/m <sup>3</sup> | <0.01 |
| PROC18 - Greasing at high energy conditions                                                                                   | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC18 - Greasing at high energy conditions                                                                                   | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC10 - Roller application or brushing                                                                                       | Worker - inhalative, long-term - systemic | 237.7 mg/m <sup>3</sup> | 0.075 |
| PROC10 - Roller application or brushing                                                                                       | Worker - dermal, long-term - systemic     | 1.372 mg/kg/d           | <0.01 |
| PROC10 - Roller application or brushing                                                                                       | Worker - combined, long-term - systemic   |                         | 0.078 |
| PROC13 - Treatment of articles by dipping and pouring                                                                         | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup> | 0.018 |
| PROC13 - Treatment of articles by dipping and pouring                                                                         | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC13 - Treatment of articles by dipping and pouring                                                                         | Worker - combined, long-term - systemic   |                         | 0.019 |
| PROC10 - Roller application or brushing                                                                                       | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup> | 0.018 |
| PROC10 - Roller application or brushing                                                                                       | Worker - dermal, long-term - systemic     | 1.372 mg/kg/d           | <0.01 |
| PROC10 - Roller application or brushing                                                                                       | Worker - combined, long-term - systemic   |                         | 0.021 |
| PROC13 - Treatment of articles by dipping and pouring                                                                         | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup> | 0.809 |
| PROC13 - Treatment of articles by dipping and pouring                                                                         | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC13 - Treatment of articles by dipping and pouring                                                                         | Worker - combined, long-term - systemic   |                         | 0.019 |
| PROC7 - Industrial spraying                                                                                                   | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup> | 0.018 |
| PROC7 - Industrial spraying                                                                                                   | Worker - dermal, long-term - systemic     | 2.143 mg/kg/d           | <0.01 |
| PROC7 - Industrial spraying                                                                                                   | Worker - combined, long-term              |                         | 0.022 |

|                                                                                                                                                                                                  |                                           |                         |       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
|                                                                                                                                                                                                  | - systemic                                |                         |       |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                    | Worker - inhalative, long-term - systemic | 332.9 mg/m <sup>3</sup> | 0.106 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                    | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                    | Worker - combined, long-term - systemic   |                         | 0.107 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                    | Worker - inhalative, long-term - systemic | 16.64 mg/m <sup>3</sup> | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                    | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                    | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - inhalative, long-term - systemic | 332.9 mg/m <sup>3</sup> | 0.106 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - dermal, long-term - systemic     | 0.411 mg/kg/d           | <0.01 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - combined, long-term - systemic   |                         | 0.106 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                  | Worker - inhalative, long-term - systemic | 443.8 mg/m <sup>3</sup> | 0.141 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                  | Worker - dermal, long-term - systemic     | 0.343 mg/kg/d           | <0.01 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                  | Worker - combined, long-term - systemic   |                         | 0.141 |
| PROC1 - Use in closed process, no likelihood of exposure                                                                                                                                         | Worker - inhalative, long-term - systemic | 0.022 mg/m <sup>3</sup> | <0.01 |
| PROC1 - Use in closed process, no                                                                                                                                                                | Worker - dermal, long-term -              | 0.0034 mg/kg/d          | <0.01 |

|                                                                               |                                           |                         |       |
|-------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
| likelihood of exposure                                                        | systemic                                  |                         |       |
| PROC1 - Use in closed process, no likelihood of exposure                      | Worker - combined, long-term - systemic   |                         | <0.01 |
| PROC2 - Use in closed, continuous process with occasional controlled exposure | Worker - inhalative, long-term - systemic | 55.48 mg/m <sup>3</sup> | 0.018 |
| PROC2 - Use in closed, continuous process with occasional controlled exposure | Worker - dermal, long-term - systemic     | 0.069 mg/kg/d           | <0.01 |
| PROC2 - Use in closed, continuous process with occasional controlled exposure | Worker - combined, long-term - systemic   |                         | 0.018 |

#### **Section 4 - Guidance to check compliance with the exposure scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. <http://www.ecetoc.org/tra>.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** DIMETHOXYMETHANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119664781-31-XXXX  
**CAS No** 109-87-5  
**EC No (EU Index No)** 203-714-2  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Laboratory chemicals  
**Type** Worker  
**Main user group** Industrial uses: Uses of substances as such or in preparations at industrial sites  
**Environmental release category(ies)** ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles  
**Specific Environmental Release Category** ESVOC SpERC 4.1.v2  
**Process category(ies)** PROC15 - Use as laboratory reagent  
**Product category(ies)** PC21 - Laboratory chemicals  
**Sector(s) of use** SU3 - Industrial uses: Uses of substances as such or in preparations at industrial sites

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles

**Specific Environmental Release Category** - ESVOC SpERC 4.1.v2

**Covers concentrations up to** 100 %  
**Amounts used**

|       |                       |
|-------|-----------------------|
| Type  | Daily amount per site |
| Value | 5                     |
| Units | tonnes                |

|       |                        |
|-------|------------------------|
| Type  | Annual amount per site |
| Units | t(ons)/year            |

#### Product characteristics

|                                           |        |
|-------------------------------------------|--------|
| Physical form of product                  | Liquid |
| Vapour pressure                           | 40 kPa |
| Temperature associated to vapour pressure | 20 C   |

#### Conditions and measures related to municipal sewage treatment plant

|                                              |                                         |
|----------------------------------------------|-----------------------------------------|
| Assumed domestic sewage treatment plant flow | 2000 m3/d                               |
| Sludge treatment                             | No application of sewage sludge to soil |

**Conditions and measures related to external treatment of waste for disposal**

|                         |                                                                                                          |
|-------------------------|----------------------------------------------------------------------------------------------------------|
| Disposal                | External treatment and disposal of waste should comply with applicable local and/or national regulations |
| Waste treatment methods | Aerobic biological treatment                                                                             |

**Control of worker exposure**

|                                                                                        |                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC15 - Use as laboratory reagent                                                                                                                                                                                               |
| Title                                                                                  | Laboratory activities                                                                                                                                                                                                            |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                            |
| Physical form of product                                                               | Liquid                                                                                                                                                                                                                           |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Use suitable eye protection                                                                                                                                                                                                      |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |

**Section 3 - Exposure estimation**

**Environmental release category(ies) - ERC4 - Industrial use of processing aids in processes and products, not becoming part of articles**

**Specific Environmental Release Category - ESVOC SpERC 4.1.v2**

**Predicted No Effect Concentration (PNEC)**

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 14.58 mg/l  |
| Freshwater sediment        | 13.14 mg/kg |
| Marine water               | 1.477 mg/l  |
| Marine sediment            | 1.314 mg/kg |
| Soil                       | 4.654 mg/kg |
| Impact on Sewage Treatment | 10 mg/l     |

**Calculation method** Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 2.258 mg/l               | 0.155                             |
| Freshwater sediment         | 9.381 mg/kg              | 0.155                             |
| Marine water                | 0.226 mg/l               | 0.155                             |
| Marine sediment             | 0.938 mg/kg              | 0.155                             |
| STP: Sewage Treatment Plant | 22.57 mg/l               | <0.01                             |
| Soil                        | 0.0000757 mg/kg          | <0.01                             |

**Derived No Effect Level (DNEL):**

|                                           |                         |
|-------------------------------------------|-------------------------|
| Worker - dermal, long-term - systemic     | 17.9 mg/kg/d            |
| Worker - inhalative, long-term - systemic | 126.6 mg/m <sup>3</sup> |

**Calculation method** The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

| Process category(ies) | Exposure route | predicted exposure level | Risk characterisation ratio |
|-----------------------|----------------|--------------------------|-----------------------------|
|-----------------------|----------------|--------------------------|-----------------------------|

|                                    |                                           |                         | (RCR) |
|------------------------------------|-------------------------------------------|-------------------------|-------|
| PROC15 - Use as laboratory reagent | Worker - inhalative, long-term - systemic | 110.9 mg/m <sup>3</sup> | 0.035 |
| PROC15 - Use as laboratory reagent | Worker - dermal, long-term - systemic     | 0.017 mg/kg/d           | <0.01 |
| PROC15 - Use as laboratory reagent | Worker - combined, long-term - systemic   |                         | 0.035 |

#### Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMS or a site-specific chemical safety assessment is required. For scaling see. <http://www.ecetoc.org/tra>.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** DIMETHOXYMETHANE  
**Pure substance/mixture** Substance  
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**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Coatings and paints, thinners, paint removers ( Professional use )  
**Type** Worker  
**Main user group** Professional uses: Public domain (administration, education, entertainment, services, craftsmen)  
**Environmental release category(ies)** ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems  
**Specific Environmental Release Category** ESVOC SpERC 8.3b.v2  
**Process category(ies)** PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)  
 PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities  
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities  
 PROC10 - Roller application or brushing  
 PROC11 - Non industrial spraying  
 PROC13 - Treatment of articles by dipping and pouring  
 PROC15 - Use as laboratory reagent  
 PROC28 - Manual maintenance (cleaning and repair) of machinery  
**Product category(ies)** PC9a - Coatings and paints, thinners, paint removers  
**Sector(s) of use** SU22 - Professional uses

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC8a - Wide dispersive indoor use of processing aids in open systems  
 - ERC8d - Wide dispersive outdoor use of processing aids in open systems  
**Specific Environmental Release Category** - ESVOC SpERC 8.3b.v2

#### Product characteristics

|                                           |        |
|-------------------------------------------|--------|
| Physical form of product                  | Liquid |
| Vapour pressure                           | 40 kPa |
| Temperature associated to vapour pressure | 20 C   |

#### Conditions and measures related to municipal sewage treatment plant

|                                              |               |
|----------------------------------------------|---------------|
| Type                                         | Municipal STP |
| Assumed domestic sewage treatment plant flow | 2000 m3/d     |

**Conditions and measures related to external treatment of waste for disposal**

|          |                                                                                                          |
|----------|----------------------------------------------------------------------------------------------------------|
| Disposal | External treatment and disposal of waste should comply with applicable local and/or national regulations |
|----------|----------------------------------------------------------------------------------------------------------|

**Control of worker exposure**

|                                                                                       |                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                 | PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)                                                                                                                              |
| Title                                                                                 | Preparation of material for application ( Outdoor use )                                                                                                                                                                                                          |
| Covers concentrations up to                                                           | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                         | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Conditions and measures related to personal protection, hygiene and health evaluation | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure           | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Indoor/Outdoor use                                                                    | Covers outdoor use                                                                                                                                                                                                                                               |
| Operational conditions                                                                | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact)                                                                                                                              |
| Title                                                                                  | Preparation of material for application ( Indoor use )                                                                                                                                                                                                           |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                                                       |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                                                                       |                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                 | PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities                                                                                                                                |
| Title                                                                                 | Drum/batch transfers ( Outdoor use )                                                                                                                                                                                                                             |
| Covers concentrations up to                                                           | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                         | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Conditions and measures related to personal protection, hygiene and health evaluation | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure           | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Indoor/Outdoor use                                                                    | Covers outdoor use                                                                                                                                                                                                                                               |
| Operational conditions                                                                | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                             |                                                                                                                                   |
|-----------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)       | PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities |
| Title                       | Drum/batch transfers ( Indoor use )                                                                                               |
| Covers concentrations up to | 100 %                                                                                                                             |
| Use frequency               | Covers daily exposures up to 8 hours (unless stated differently).                                                                 |

|                                                                                        |                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Local exhaust ventilation - efficiency of at least 80%                                                                                                                      |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training<br>Use suitable eye protection<br>Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately<br>Clean equipment and the work area every day<br>Regular inspection and maintenance of equipment and machines<br>Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                                                                |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                                    |

|                                                                                        |                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                                                                                             |
| Title                                                                                  | Drum/batch transfers                                                                                                                                                                                                                                                      |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                     |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 1 hour                                                                                                                                                                                                     |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                         |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Local exhaust ventilation - efficiency of at least 90%                                                                                                                      |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training<br>Use suitable eye protection<br>Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately<br>Clean equipment and the work area every day<br>Regular inspection and maintenance of equipment and machines<br>Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                                                                |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                                    |

|                                                                                       |                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                 | PROC10 - Roller application or brushing                                                                                                                                                                                                                                                                                              |
| Title                                                                                 | Roller, spreader, flow application ( Outdoor use )                                                                                                                                                                                                                                                                                   |
| Covers concentrations up to                                                           | 100 %                                                                                                                                                                                                                                                                                                                                |
| Exposure duration                                                                     | Avoid carrying out activities involving exposure for more than 4 hours                                                                                                                                                                                                                                                               |
| Use frequency                                                                         | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                                                                                    |
| Conditions and measures related to personal protection, hygiene and health evaluation | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training<br>Use suitable eye protection<br>Wear suitable coveralls to prevent exposure to the skin<br>Wear a respirator providing a minimum efficiency of 90%<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure           | Clear spills immediately<br>Clean equipment and the work area every day<br>Regular inspection and maintenance of equipment and machines<br>Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                                                                            |
| Indoor/Outdoor use                                                                    | Covers outdoor use                                                                                                                                                                                                                                                                                                                   |
| Operational conditions                                                                | Assumes process temperature up to 25 C                                                                                                                                                                                                                                                                                               |

|                                                                                        |                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC10 - Roller application or brushing                                                                                                                                                                                                                                   |
| Title                                                                                  | Roller, spreader, flow application ( Indoor use )                                                                                                                                                                                                                         |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                     |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 4 hours                                                                                                                                                                                                    |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                         |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Local exhaust ventilation - efficiency of at least 80%                                                                                                                      |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training<br>Use suitable eye protection<br>Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent                                                     | Clear spills immediately<br>Clean equipment and the work area every day<br>Regular inspection                                                                                                                                                                             |

|                                          |                                                                                                                                          |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| /limit releases, dispersion and exposure | and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Indoor/Outdoor use                       | Indoor use                                                                                                                               |
| Operational conditions                   | Assumes process temperature up to 25 C                                                                                                   |

|                                                                                       |                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                 | PROC11 - Non industrial spraying                                                                                                                                                                                                                                                                                         |
| Title                                                                                 | Manual spraying ( Outdoor use )                                                                                                                                                                                                                                                                                          |
| Covers concentrations up to                                                           | 100 %                                                                                                                                                                                                                                                                                                                    |
| Exposure duration                                                                     | Avoid carrying out activities involving exposure for more than 4 hours                                                                                                                                                                                                                                                   |
| Use frequency                                                                         | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                                                                        |
| Conditions and measures related to personal protection, hygiene and health evaluation | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin Wear a respirator providing a minimum efficiency of 95% See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure           | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                                                                         |
| Indoor/Outdoor use                                                                    | Covers outdoor use                                                                                                                                                                                                                                                                                                       |
| Operational conditions                                                                | Assumes process temperature up to 25 C                                                                                                                                                                                                                                                                                   |

|                                                                                        |                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC11 - Non industrial spraying                                                                                                                                                                                                                                                                                         |
| Title                                                                                  | Manual spraying ( Indoor use )                                                                                                                                                                                                                                                                                           |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                                                                    |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                                                                        |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                                                                               |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin Wear a respirator providing a minimum efficiency of 90% See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                                                                         |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                                                                                                               |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                                                                                   |

|                                                                                       |                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                 | PROC13 - Treatment of articles by dipping and pouring                                                                                                                                                                                                                                                                    |
| Title                                                                                 | Treatment of articles by dipping and pouring ( Outdoor use )                                                                                                                                                                                                                                                             |
| Covers concentrations up to                                                           | 100 %                                                                                                                                                                                                                                                                                                                    |
| Exposure duration                                                                     | Avoid carrying out activities involving exposure for more than 4 hours                                                                                                                                                                                                                                                   |
| Use frequency                                                                         | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                                                                        |
| Conditions and measures related to personal protection, hygiene and health evaluation | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin Wear a respirator providing a minimum efficiency of 90% See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure           | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                                                                         |
| Indoor/Outdoor use                                                                    | Covers outdoor use                                                                                                                                                                                                                                                                                                       |
| Operational conditions                                                                | Assumes process temperature up to 25 C                                                                                                                                                                                                                                                                                   |

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| Process category(ies)       | PROC13 - Treatment of articles by dipping and pouring                  |
| Title                       | Treatment of articles by dipping and pouring ( Indoor use )            |
| Covers concentrations up to | 100 %                                                                  |
| Exposure duration           | Avoid carrying out activities involving exposure for more than 4 hours |

|                                                                                        |                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                         |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Local exhaust ventilation - efficiency of at least 80%                                                                                                                      |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training<br>Use suitable eye protection<br>Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately<br>Clean equipment and the work area every day<br>Regular inspection and maintenance of equipment and machines<br>Supervision in place to check that the RMMS in place are being used correctly and OCs followed                                 |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                                                                |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                                    |

|                                                                                        |                                                                                                                                                                                                                                                                           |
|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC15 - Use as laboratory reagent                                                                                                                                                                                                                                        |
| Title                                                                                  | Laboratory activities ( Indoor use )                                                                                                                                                                                                                                      |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                     |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                         |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                                |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training<br>Use suitable eye protection<br>Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately<br>Clean equipment and the work area every day<br>Regular inspection and maintenance of equipment and machines<br>Supervision in place to check that the RMMS in place are being used correctly and OCs followed                                 |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                                                                |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                                    |

|                                                                                        |                                                                                                                                                                                                                                                                            |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities<br>PROC28 - Manual maintenance (cleaning and repair) of machinery                                                                        |
| Title                                                                                  | Equipment cleaning and maintenance                                                                                                                                                                                                                                         |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                      |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 1 hour                                                                                                                                                                                                      |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                          |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                                 |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with specific activity training<br>Use suitable eye protection<br>Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately<br>Clean equipment and the work area every day<br>Regular inspection and maintenance of equipment and machines<br>Supervision in place to check that the RMMS in place are being used correctly and OCs followed                                  |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                                     |

### **Section 3 - Exposure estimation**

**Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems  
- ERC8d - Wide dispersive outdoor use of processing aids in open systems  
Specific Environmental Release Category - ESVOC SpERC 8.3b.v2**

**Predicted No Effect Concentration**

**(PNEC)**

|                                   |             |
|-----------------------------------|-------------|
| <b>Freshwater</b>                 | 14.58 mg/l  |
| <b>Freshwater sediment</b>        | 13.14 mg/kg |
| <b>Marine water</b>               | 1.477 mg/l  |
| <b>Marine sediment</b>            | 1.314 mg/kg |
| <b>Soil</b>                       | 4.654 mg/kg |
| <b>Impact on Sewage Treatment</b> | 10 mg/l     |

**Calculation method**

Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 0.000394 mg/l            | <0.01                             |
| Freshwater sediment         | 0.00164 mg/kg            | <0.01                             |
| Marine water                | 0.0000348 mg/l           | <0.01                             |
| Marine sediment             | 0.000145 mg/kg           | <0.01                             |
| STP: Sewage Treatment Plant | 0.0000371 mg/l           | <0.01                             |
| Soil                        | 0.00000448 mg/kg         | <0.01                             |

**Derived No Effect Level (DNEL):**

|                                                  |                        |
|--------------------------------------------------|------------------------|
| <b>Worker - dermal, long-term - systemic</b>     | 17.9 mg/kg/d           |
| <b>Worker - inhalative, long-term - systemic</b> | 3160 mg/m <sup>3</sup> |

**Calculation method**

The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

| Process category(ies)                                                                                                               | Exposure route                            | predicted exposure level | Risk characterisation ratio (RCR) |
|-------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------|-----------------------------------|
| PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) | Worker - inhalative, long-term - systemic | 1110 mg/m <sup>3</sup>   | 0.352                             |
| PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) | Worker - dermal, long-term - systemic     | 1.371 mg/kg/d            | <0.01                             |
| PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) | Worker - combined, long-term - systemic   |                          | 0.355                             |
| PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) | Worker - inhalative, long-term - systemic | 1110 mg/m <sup>3</sup>   | 0.352                             |
| PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) | Worker - dermal, long-term - systemic     | 1.371 mg/kg/d            | <0.01                             |
| PROC5 - Mixing or blending in batch processes for formulation of preparations and articles (multi-stage and/or significant contact) | Worker - combined, long-term - systemic   |                          | 0.355                             |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities   | Worker - inhalative, long-term - systemic | 1110 mg/m <sup>3</sup>   | 0.352                             |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non                        | Worker - dermal, long-term - systemic     | 1.371 mg/kg/d            | <0.01                             |

|                                                                                                                                   |                                           |                         |       |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
| dedicated facilities                                                                                                              |                                           |                         |       |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - combined, long-term - systemic   |                         | 0.355 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - inhalative, long-term - systemic | 1110 mg/m <sup>3</sup>  | 0.352 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - dermal, long-term - systemic     | 1.371 mg/kg/d           | <0.01 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - combined, long-term - systemic   |                         | 0.355 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - inhalative, long-term - systemic | 554.8 mg/m <sup>3</sup> | 0.176 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - dermal, long-term - systemic     | 1.371 mg/kg/d           | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - combined, long-term - systemic   |                         | 0.179 |
| PROC10 - Roller application or brushing                                                                                           | Worker - inhalative, long-term - systemic | 1110 mg/m <sup>3</sup>  | 0.352 |
| PROC10 - Roller application or brushing                                                                                           | Worker - dermal, long-term - systemic     | 2.743 mg/kg/d           | <0.01 |
| PROC10 - Roller application or brushing                                                                                           | Worker - combined, long-term - systemic   |                         | 0.358 |
| PROC10 - Roller application or brushing                                                                                           | Worker - inhalative, long-term - systemic | 1110 mg/m <sup>3</sup>  | 0.352 |
| PROC10 - Roller application or brushing                                                                                           | Worker - dermal, long-term - systemic     | 2.743 mg/kg/d           | <0.01 |
| PROC10 - Roller application or brushing                                                                                           | Worker - combined, long-term - systemic   |                         | 0.358 |
| PROC11 - Non industrial spraying                                                                                                  | Worker - inhalative, long-term - systemic | 2220 mg/m <sup>3</sup>  | 0.703 |
| PROC11 - Non industrial spraying                                                                                                  | Worker - dermal, long-term - systemic     | 10.71 mg/kg/d           | 0.024 |
| PROC11 - Non industrial spraying                                                                                                  | Worker - combined, long-term - systemic   |                         | 0.727 |
| PROC11 - Non industrial spraying                                                                                                  | Worker - inhalative, long-term - systemic | 2220 mg/m <sup>3</sup>  | 0.703 |
| PROC11 - Non industrial spraying                                                                                                  | Worker - dermal, long-term - systemic     | 10.71 mg/kg/d           | 0.024 |
| PROC11 - Non industrial spraying                                                                                                  | Worker - combined, long-term - systemic   |                         | 0.727 |
| PROC13 - Treatment of articles by dipping and pouring                                                                             | Worker - inhalative, long-term - systemic | 554.8 mg/m <sup>3</sup> | 0.176 |
| PROC13 - Treatment of articles by dipping and pouring                                                                             | Worker - dermal, long-term - systemic     | 1.371 mg/kg/d           | <0.01 |

|                                                                                                                                                                                                  |                                           |                         |       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
| PROC13 - Treatment of articles by dipping and pouring                                                                                                                                            | Worker - combined, long-term - systemic   |                         | 0.179 |
| PROC13 - Treatment of articles by dipping and pouring                                                                                                                                            | Worker - inhalative, long-term - systemic | 554.8 mg/m <sup>3</sup> | 0.176 |
| PROC13 - Treatment of articles by dipping and pouring                                                                                                                                            | Worker - dermal, long-term - systemic     | 1.371 mg/kg/d           | <0.01 |
| PROC13 - Treatment of articles by dipping and pouring                                                                                                                                            | Worker - combined, long-term - systemic   |                         | 0.179 |
| PROC15 - Use as laboratory reagent                                                                                                                                                               | Worker - inhalative, long-term - systemic | 110.9 mg/m <sup>3</sup> | 0.035 |
| PROC15 - Use as laboratory reagent                                                                                                                                                               | Worker - dermal, long-term - systemic     | 0.034 mg/kg/d           | <0.01 |
| PROC15 - Use as laboratory reagent                                                                                                                                                               | Worker - combined, long-term - systemic   |                         | 0.035 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - inhalative, long-term - systemic | 1110 mg/m <sup>3</sup>  | 0.352 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - dermal, long-term - systemic     | 1.371 mg/kg/d           | <0.01 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - combined, long-term - systemic   |                         | 0.355 |

#### **Section 4 - Guidance to check compliance with the exposure scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. <http://www.ecetoc.org/tra>.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** DIMETHOXYMETHANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119664781-31-XXXX  
**CAS No** 109-87-5  
**EC No (EU Index No)** 203-714-2  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Washing and cleaning products ( Professional use )  
**Type** Worker  
**Main user group** Professional uses: Public domain (administration, education, entertainment, services, craftsmen)  
**Environmental release category(ies)** ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems  
**Specific Environmental Release Category** ESVOC SpERC 8.4b.v3 ESVOC SpERC 4.4a.v3 ESVOC SpERC 8.3b.v2  
**Process category(ies)** PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities  
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities  
 PROC10 - Roller application or brushing  
 PROC11 - Non industrial spraying  
 PROC13 - Treatment of articles by dipping and pouring  
**Product category(ies)** PC35 - Washing and cleaning products (including solvent based products)  
**Sector(s) of use** SU22 - Professional uses

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC8a - Wide dispersive indoor use of processing aids in open systems  
 - ERC8d - Wide dispersive outdoor use of processing aids in open systems  
**Specific Environmental Release Category** - **ESVOC SpERC 8.4b.v3**  
**- ESVOC SpERC 4.4a.v3**  
**- ESVOC SpERC 8.3b.v2**

#### Product characteristics

|                                           |        |
|-------------------------------------------|--------|
| Physical form of product                  | Liquid |
| Vapour pressure                           | 40 kPa |
| Temperature associated to vapour pressure | 20 C   |

#### Conditions and measures related to municipal sewage treatment plant

|                                              |               |
|----------------------------------------------|---------------|
| Type                                         | Municipal STP |
| Assumed domestic sewage treatment plant flow | 2000 m3/d     |

#### Conditions and measures related to external treatment of waste for disposal

|          |                                                                                                          |
|----------|----------------------------------------------------------------------------------------------------------|
| Disposal | External treatment and disposal of waste should comply with applicable local and/or national regulations |
|----------|----------------------------------------------------------------------------------------------------------|

| <b>Control of worker exposure</b>                                                      |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities                                                                                                                                |
| Title                                                                                  | Filling/preparation of equipment from drums or containers.                                                                                                                                                                                                       |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                                                       |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                                                                                    |
| Title                                                                                  | Filling/preparation of equipment from drums or containers.                                                                                                                                                                                                       |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 1 hour                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                                                       |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC13 - Treatment of articles by dipping and pouring                                                                                                                                                                                                            |
| Title                                                                                  | Surface cleaning                                                                                                                                                                                                                                                 |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                                                       |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                       |                                         |
|-----------------------|-----------------------------------------|
| Process category(ies) | PROC10 - Roller application or brushing |
|-----------------------|-----------------------------------------|

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Title                                                                                  | Cleaning with low-pressure washers                                                                                                                                                                                                                               |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                                                       |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                                                                       |                                                                                                                                                                                                                                                                                                                          |
|---------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                 | PROC11 - Non industrial spraying                                                                                                                                                                                                                                                                                         |
| Title                                                                                 | Cleaning with high-pressure washers ( Outdoor use )                                                                                                                                                                                                                                                                      |
| Covers concentrations up to                                                           | 100 %                                                                                                                                                                                                                                                                                                                    |
| Exposure duration                                                                     | Avoid carrying out activities involving exposure for more than 4 hours                                                                                                                                                                                                                                                   |
| Use frequency                                                                         | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                                                                        |
| Conditions and measures related to personal protection, hygiene and health evaluation | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin Wear a respirator providing a minimum efficiency of 95% See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure           | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                                                                         |
| Indoor/Outdoor use                                                                    | Outdoor use                                                                                                                                                                                                                                                                                                              |
| Operational conditions                                                                | Assumes process temperature up to 25 C                                                                                                                                                                                                                                                                                   |

|                                                                                        |                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC11 - Non industrial spraying                                                                                                                                                                                                                                                                                         |
| Title                                                                                  | Cleaning with high-pressure washers ( Indoor use )                                                                                                                                                                                                                                                                       |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                                                                    |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 4 hours                                                                                                                                                                                                                                                   |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                                                                        |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Local exhaust ventilation - efficiency of at least 80%                                                                                                                                                                        |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin Wear a respirator providing a minimum efficiency of 90% See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                                                                         |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                                                                                                               |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                                                                                   |

|                                                                                        |                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC10 - Roller application or brushing                                                                                                                                               |
| Title                                                                                  | Surface cleaning ( Manual )                                                                                                                                                           |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                 |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                     |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour) Local exhaust ventilation - efficiency of at least 80%                                     |
| Conditions and measures related to personal protection, hygiene and                    | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin |

|                                                                             |                                                                                                                                                                                                                                  |
|-----------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| health evaluation                                                           | See Section 8 for information on appropriate personal protective equipment                                                                                                                                                       |
| Organisational measures to prevent /limit releases, dispersion and exposure | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Indoor/Outdoor use                                                          | Indoor use                                                                                                                                                                                                                       |
| Operational conditions                                                      | Assumes process temperature up to 25 C                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC10 - Roller application or brushing                                                                                                                                                                                                                             |
| Title                                                                                  | Ad hoc manual application via trigger sprays, dipping, etc                                                                                                                                                                                                          |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                               |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                   |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Local exhaust ventilation - efficiency of at least 80%                                                                                                                |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                    |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                                                          |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                              |

|                                                                                        |                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC11 - Non industrial spraying                                                                                                                                                                                                                                                                                               |
| Title                                                                                  | Surface cleaning ( Manual )                                                                                                                                                                                                                                                                                                    |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                                                                          |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                                                                              |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Local exhaust ventilation - efficiency of at least 80%                                                                                                                                                                           |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin<br>Wear a respirator providing a minimum efficiency of 90%<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                                                                               |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                                                                                                                     |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                                                                                         |

|                                                                                        |                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC11 - Non industrial spraying                                                                                                                                                                                                                                                                                               |
| Title                                                                                  | Ad hoc manual application via trigger sprays, dipping, etc                                                                                                                                                                                                                                                                     |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                                                                          |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                                                                              |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)<br>Local exhaust ventilation - efficiency of at least 80%                                                                                                                                                                           |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin<br>Wear a respirator providing a minimum efficiency of 90%<br>See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                                                                               |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                                                                                                                     |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                                                                                         |

### Section 3 - Exposure estimation

**Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems**

**- ERC8d - Wide dispersive outdoor use of processing aids in open systems**

**Specific Environmental Release Category - ESVOC SpERC 8.4b.v3**

**- ESVOC SpERC 4.4a.v3**

**- ESVOC SpERC 8.3b.v2**

**Predicted No Effect Concentration  
(PNEC)**

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 14.58 mg/l  |
| Freshwater sediment        | 13.14 mg/kg |
| Marine water               | 1.477 mg/l  |
| Marine sediment            | 1.314 mg/kg |
| Soil                       | 4.654 mg/kg |
| Impact on Sewage Treatment | 10 mg/l     |

**Calculation method** Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 0.000391 mg/l            | <0.01                             |
| Freshwater sediment         | 0.00162 mg/kg            | <0.01                             |
| Marine water                | 0.0000344 mg/l           | <0.01                             |
| Marine sediment             | 0.000143 mg/kg           | <0.01                             |
| STP: Sewage Treatment Plant | 0.00000000742 mg/l       | <0.01                             |
| Soil                        | 0.00000438 mg/kg         | <0.01                             |

**Derived No Effect Level (DNEL):**

|                                           |                        |
|-------------------------------------------|------------------------|
| Worker - dermal, long-term - systemic     | 17.9 mg/kg/d           |
| Worker - inhalative, long-term - systemic | 3160 mg/m <sup>3</sup> |

**Calculation method** The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

| Process category(ies)                                                                                                             | Exposure route                            | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------|-----------------------------------|
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - inhalative, long-term - systemic | 1110 mg/m <sup>3</sup>   | 0.352                             |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - dermal, long-term - systemic     | 1.371 mg/kg/d            | <0.01                             |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - combined, long-term - systemic   |                          | 0.355                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - inhalative, long-term - systemic | 554.8 mg/m <sup>3</sup>  | 0.176                             |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - dermal, long-term - systemic     | 1.371 mg/kg/d            | <0.01                             |

|                                                                                                                               |                                           |                         |       |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
| dedicated facilities                                                                                                          |                                           |                         |       |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - combined, long-term - systemic   |                         | 0.179 |
| PROC13 - Treatment of articles by dipping and pouring                                                                         | Worker - inhalative, long-term - systemic | 554.8 mg/m <sup>3</sup> | 0.176 |
| PROC13 - Treatment of articles by dipping and pouring                                                                         | Worker - dermal, long-term - systemic     | 1.371 mg/kg/d           | <0.01 |
| PROC13 - Treatment of articles by dipping and pouring                                                                         | Worker - combined, long-term - systemic   |                         | 0.179 |
| PROC10 - Roller application or brushing                                                                                       | Worker - inhalative, long-term - systemic | 1110 mg/m <sup>3</sup>  | 0.352 |
| PROC10 - Roller application or brushing                                                                                       | Worker - dermal, long-term - systemic     | 2.743 mg/kg/d           | <0.01 |
| PROC10 - Roller application or brushing                                                                                       | Worker - combined, long-term - systemic   |                         | 0.358 |
| PROC11 - Non industrial spraying                                                                                              | Worker - inhalative, long-term - systemic | 2220 mg/m <sup>3</sup>  | 0.703 |
| PROC11 - Non industrial spraying                                                                                              | Worker - dermal, long-term - systemic     | 10.71 mg/kg/d           | 0.024 |
| PROC11 - Non industrial spraying                                                                                              | Worker - combined, long-term - systemic   |                         | 0.727 |
| PROC11 - Non industrial spraying                                                                                              | Worker - inhalative, long-term - systemic | 2220 mg/m <sup>3</sup>  | 0.703 |
| PROC11 - Non industrial spraying                                                                                              | Worker - dermal, long-term - systemic     | 10.71 mg/kg/d           | 0.024 |
| PROC11 - Non industrial spraying                                                                                              | Worker - combined, long-term - systemic   |                         | 0.727 |
| PROC10 - Roller application or brushing                                                                                       | Worker - inhalative, long-term - systemic | 1110 mg/m <sup>3</sup>  | 0.352 |
| PROC10 - Roller application or brushing                                                                                       | Worker - dermal, long-term - systemic     | 2.743 mg/kg/d           | <0.01 |
| PROC10 - Roller application or brushing                                                                                       | Worker - combined, long-term - systemic   |                         | 0.358 |
| PROC10 - Roller application or brushing                                                                                       | Worker - inhalative, long-term - systemic | 1110 mg/m <sup>3</sup>  | 0.352 |
| PROC10 - Roller application or brushing                                                                                       | Worker - dermal, long-term - systemic     | 2.743 mg/kg/d           | <0.01 |
| PROC10 - Roller application or brushing                                                                                       | Worker - combined, long-term - systemic   |                         | 0.358 |
| PROC11 - Non industrial spraying                                                                                              | Worker - inhalative, long-term - systemic | 2220 mg/m <sup>3</sup>  | 0.703 |
| PROC11 - Non industrial spraying                                                                                              | Worker - dermal, long-term - systemic     | 10.71 mg/kg/d           | 0.024 |
| PROC11 - Non industrial spraying                                                                                              | Worker - combined, long-term - systemic   |                         | 0.727 |
| PROC11 - Non industrial spraying                                                                                              | Worker - inhalative, long-term - systemic | 2220 mg/m <sup>3</sup>  | 0.703 |
| PROC11 - Non industrial spraying                                                                                              | Worker - dermal, long-term - systemic     | 10.71 mg/kg/d           | 0.024 |
| PROC11 - Non industrial spraying                                                                                              | Worker - combined, long-term - systemic   |                         | 0.727 |

#### **Section 4 - Guidance to check compliance with the exposure scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. <http://www.ecetoc.org/tra>.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** DIMETHOXYMETHANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119664781-31-XXXX  
**CAS No** 109-87-5  
**EC No (EU Index No)** 203-714-2  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Lubricants, greases, release products ( Professional use )  
**Type** Worker  
**Main user group** Professional uses: Public domain (administration, education, entertainment, services, craftsmen)  
**Environmental release category(ies)** ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems ERC9a - Wide dispersive indoor use of substances in closed systems ERC9b - Wide dispersive outdoor use of substances in closed systems  
**Specific Environmental Release Category** ESVOC SpERC 8.6c.v2 ESVOC SpERC 9.6b.v2  
**Process category(ies)** PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities  
 PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities  
 PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)  
 PROC10 - Roller application or brushing  
 PROC11 - Non industrial spraying  
 PROC13 - Treatment of articles by dipping and pouring  
 PROC17 - Lubrication at high energy conditions and in partly open process  
 PROC18 - Greasing at high energy conditions  
 PROC28 - Manual maintenance (cleaning and repair) of machinery  
**Product category(ies)** PC24 - Lubricants, greases, release products  
**Sector(s) of use** SU22 - Professional uses

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC8a - Wide dispersive indoor use of processing aids in open systems  
 - ERC8d - Wide dispersive outdoor use of processing aids in open systems  
 - ERC9a - Wide dispersive indoor use of substances in closed systems  
 - ERC9b - Wide dispersive outdoor use of substances in closed systems  
**Specific Environmental Release Category** - ESVOC SpERC 8.6c.v2  
- ESVOC SpERC 9.6b.v2

#### Product characteristics

|                                  |        |
|----------------------------------|--------|
| Physical form of product         | Liquid |
| Vapour pressure                  | 40 kPa |
| Temperature associated to vapour | 20 C   |

|          |  |
|----------|--|
| pressure |  |
|----------|--|

**Conditions and measures related to municipal sewage treatment plant**

|                                              |               |
|----------------------------------------------|---------------|
| Type                                         | Municipal STP |
| Assumed domestic sewage treatment plant flow | 2000 m3/d     |

**Conditions and measures related to external treatment of waste for disposal**

|          |                                                                                                          |
|----------|----------------------------------------------------------------------------------------------------------|
| Disposal | External treatment and disposal of waste should comply with applicable local and/or national regulations |
|----------|----------------------------------------------------------------------------------------------------------|

**Control of worker exposure**

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                                                                                    |
| Title                                                                                  | Bulk transfers                                                                                                                                                                                                                                                   |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Exposure duration                                                                      | Avoid carrying out activities involving exposure for more than 1 hour                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                                                       |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                                                                                    |
| Title                                                                                  | Filling/preparation of equipment from drums or containers.                                                                                                                                                                                                       |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                                                       |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                                                                       |                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                 | PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities                                                                                                                                |
| Title                                                                                 | Filling/preparation of equipment from drums or containers.                                                                                                                                                                                                       |
| Covers concentrations up to                                                           | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                         | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Conditions and measures related to personal protection, hygiene and health evaluation | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent                                                    | Clear spills immediately Clean equipment and the work area every day Regular inspection                                                                                                                                                                          |

|                                          |                                                                                                                                          |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| /limit releases, dispersion and exposure | and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Indoor/Outdoor use                       | Indoor use                                                                                                                               |
| Operational conditions                   | Assumes process temperature up to 25 C                                                                                                   |

|                                                                                       |                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                 | PROC17 - Lubrication at high energy conditions and in partly open process                                                                                                                                                                                        |
| Title                                                                                 | Lubrication at high energy conditions and in partly open process ( Outdoor use )                                                                                                                                                                                 |
| Covers concentrations up to                                                           | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                         | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Conditions and measures related to personal protection, hygiene and health evaluation | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure           | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Indoor/Outdoor use                                                                    | Outdoor use                                                                                                                                                                                                                                                      |
| Operational conditions                                                                | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC17 - Lubrication at high energy conditions and in partly open process                                                                                                                                                                                        |
| Title                                                                                  | Lubrication at high energy conditions and in partly open process ( Indoor use )                                                                                                                                                                                  |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Local exhaust ventilation - efficiency of at least 80%                                                                                                                                                                                                           |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                                                       |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC18 - Greasing at high energy conditions                                                                                                                                                                                                                      |
| Title                                                                                  | Lubrication at high energy conditions and in partly open process ( Indoor use )                                                                                                                                                                                  |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Local exhaust ventilation - efficiency of at least 80%                                                                                                                                                                                                           |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                                                       |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                      |                                                                                                                               |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities |
| Title                                | Equipment cleaning and maintenance                                                                                            |
| Covers concentrations up to          | 100 %                                                                                                                         |
| Use frequency                        | Covers daily exposures up to 8 hours (unless stated differently).                                                             |
| Technical conditions and measures to | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                    |

|                                                                                       |                                                                                                                                                                                                                                                                  |
|---------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| control dispersion from source towards the worker                                     |                                                                                                                                                                                                                                                                  |
| Conditions and measures related to personal protection, hygiene and health evaluation | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure           | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Indoor/Outdoor use                                                                    | Indoor use                                                                                                                                                                                                                                                       |
| Operational conditions                                                                | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                                                                                    |
| Title                                                                                  | Equipment cleaning and maintenance Elevated temperature                                                                                                                                                                                                          |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                                                       |
| Operational conditions                                                                 | Assumes process temperature up to 50 C                                                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery                                                                 |
| Title                                                                                  | Equipment cleaning and maintenance Elevated temperature                                                                                                                                                                                                          |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Operational conditions                                                                 | Assumes process temperature up to 50 C                                                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                                                                                  |
| Title                                                                                  | Engine lubricant service                                                                                                                                                                                                                                         |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent                                                     | Clear spills immediately Clean equipment and the work area every day Regular inspection                                                                                                                                                                          |

|                                          |                                                                                                                                          |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| /limit releases, dispersion and exposure | and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Indoor/Outdoor use                       | Indoor use                                                                                                                               |
| Operational conditions                   | Assumes process temperature up to 25 C                                                                                                   |

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC10 - Roller application or brushing                                                                                                                                                                                                                          |
| Title                                                                                  | Roller, spreader, flow application                                                                                                                                                                                                                               |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                                                       |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                                                                                        |                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC11 - Non industrial spraying                                                                                                                                                                                                                                                                                         |
| Title                                                                                  | Spraying                                                                                                                                                                                                                                                                                                                 |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                                                                                    |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                                                                        |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                                                                               |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin Wear a respirator providing a minimum efficiency of 95% See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                                                                         |
| Indoor/Outdoor use                                                                     | Covers outdoor use                                                                                                                                                                                                                                                                                                       |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                                                                                   |

|                                                                                        |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category(ies)                                                                  | PROC13 - Treatment of articles by dipping and pouring                                                                                                                                                                                                            |
| Title                                                                                  | Treatment of articles by dipping and pouring ( Indoor use )                                                                                                                                                                                                      |
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear chemically resistant gloves (tested to EN 374) in combination with 'basic' employee training Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed                                 |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                                                       |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                                                           |

|                       |                                                                                               |
|-----------------------|-----------------------------------------------------------------------------------------------|
| Process category(ies) | PROC20 - Heat and pressure transfer fluids in dispersive, professional use but closed systems |
| Title                 | Operation of equipment containing engine oils and similar                                     |

|                                                                                        |                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Covers concentrations up to                                                            | 100 %                                                                                                                                                                                                                            |
| Use frequency                                                                          | Covers daily exposures up to 8 hours (unless stated differently).                                                                                                                                                                |
| Technical conditions and measures to control dispersion from source towards the worker | Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)                                                                                                                                       |
| Conditions and measures related to personal protection, hygiene and health evaluation  | Wear suitable gloves tested to EN 374 Use suitable eye protection Wear suitable coveralls to prevent exposure to the skin See Section 8 for information on appropriate personal protective equipment                             |
| Organisational measures to prevent /limit releases, dispersion and exposure            | Clear spills immediately Clean equipment and the work area every day Regular inspection and maintenance of equipment and machines Supervision in place to check that the RMMs in place are being used correctly and OCs followed |
| Indoor/Outdoor use                                                                     | Indoor use                                                                                                                                                                                                                       |
| Operational conditions                                                                 | Assumes process temperature up to 25 C                                                                                                                                                                                           |

### Section 3 - Exposure estimation

**Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems**  
**- ERC8d - Wide dispersive outdoor use of processing aids in open systems**  
**- ERC9a - Wide dispersive indoor use of substances in closed systems**  
**- ERC9b - Wide dispersive outdoor use of substances in closed systems**  
**Specific Environmental Release Category - ESVOC SpERC 8.6c.v2**  
**- ESVOC SpERC 9.6b.v2**

#### **Predicted No Effect Concentration (PNEC)**

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 14.58 mg/l  |
| Freshwater sediment        | 13.14 mg/kg |
| Marine water               | 1.477 mg/l  |
| Marine sediment            | 1.314 mg/kg |
| Soil                       | 4.654 mg/kg |
| Impact on Sewage Treatment | 10 mg/l     |

#### **Calculation method** Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 0.000395 mg/l            | <0.01                             |
| Freshwater sediment         | 0.00164 mg/kg            | <0.01                             |
| Marine water                | 0.0000349 mg/l           | <0.01                             |
| Marine sediment             | 0.000145 mg/kg           | <0.01                             |
| STP: Sewage Treatment Plant | 0.0000464 mg/l           | <0.01                             |
| Soil                        | 0.0000045 mg/kg          | <0.01                             |

#### **Derived No Effect Level (DNEL):**

|                                           |                        |
|-------------------------------------------|------------------------|
| Worker - dermal, long-term - systemic     | 17.9 mg/kg/d           |
| Worker - inhalative, long-term - systemic | 3160 mg/m <sup>3</sup> |

#### **Calculation method** The ECETOC TRA tool has been used to estimate workplace exposures unless otherwise indicated

| Process category(ies)                                                                                                         | Exposure route                            | predicted exposure level | Risk characterisation ratio (RCR) |
|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|--------------------------|-----------------------------------|
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities | Worker - inhalative, long-term - systemic | 554.8 mg/m <sup>3</sup>  | 0.176                             |

|                                                                                                                                   |                                           |                         |       |
|-----------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - dermal, long-term - systemic     | 1.371 mg/kg/d           | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - combined, long-term - systemic   |                         | 0.179 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - inhalative, long-term - systemic | 554.8 mg/m <sup>3</sup> | 0.176 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - dermal, long-term - systemic     | 1.371 mg/kg/d           | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - combined, long-term - systemic   |                         | 0.179 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - inhalative, long-term - systemic | 1110 mg/m <sup>3</sup>  | 0.352 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - dermal, long-term - systemic     | 1.371 mg/kg/d           | <0.01 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities | Worker - combined, long-term - systemic   |                         | 0.355 |
| PROC17 - Lubrication at high energy conditions and in partly open process                                                         | Worker - inhalative, long-term - systemic | 317.0 mg/m <sup>3</sup> | 0.1   |
| PROC17 - Lubrication at high energy conditions and in partly open process                                                         | Worker - dermal, long-term - systemic     | 2.743 mg/kg/d           | <0.01 |
| PROC17 - Lubrication at high energy conditions and in partly open process                                                         | Worker - combined, long-term - systemic   |                         | 0.107 |
| PROC17 - Lubrication at high energy conditions and in partly open process                                                         | Worker - inhalative, long-term - systemic | 1110 mg/m <sup>3</sup>  | 0.352 |
| PROC17 - Lubrication at high energy conditions and in partly open process                                                         | Worker - dermal, long-term - systemic     | 2.743 mg/kg/d           | <0.01 |
| PROC17 - Lubrication at high energy conditions and in partly open process                                                         | Worker - combined, long-term - systemic   |                         | 0.358 |
| PROC18 - Greasing at high energy conditions                                                                                       | Worker - inhalative, long-term - systemic | 317.0 mg/m <sup>3</sup> | 0.1   |
| PROC18 - Greasing at high energy conditions                                                                                       | Worker - dermal, long-term - systemic     | 1.371 mg/kg/d           | <0.01 |
| PROC18 - Greasing at high energy conditions                                                                                       | Worker - combined, long-term - systemic   |                         | 0.104 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - inhalative, long-term - systemic | 554.8 mg/m <sup>3</sup> | 0.176 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities     | Worker - dermal, long-term - systemic     | 1.371 mg/kg/d           | <0.01 |

|                                                                                                                                                                                                  |                                           |                         |       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                    | Worker - combined, long-term - systemic   |                         | 0.179 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                    | Worker - inhalative, long-term - systemic | 554.8 mg/m <sup>3</sup> | 0.176 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                    | Worker - dermal, long-term - systemic     | 1.371 mg/kg/d           | <0.01 |
| PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities                                                                    | Worker - combined, long-term - systemic   |                         | 0.179 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - inhalative, long-term - systemic | 1110 mg/m <sup>3</sup>  | 0.352 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - dermal, long-term - systemic     | 1.371 mg/kg/d           | <0.01 |
| PROC8a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities PROC28 - Manual maintenance (cleaning and repair) of machinery | Worker - combined, long-term - systemic   |                         | 0.355 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                  | Worker - inhalative, long-term - systemic | 554.8 mg/m <sup>3</sup> | 0.176 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                  | Worker - dermal, long-term - systemic     | 0.686 mg/kg/d           | <0.01 |
| PROC9 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing)                                                                                  | Worker - combined, long-term - systemic   |                         | 0.177 |
| PROC10 - Roller application or brushing                                                                                                                                                          | Worker - inhalative, long-term - systemic | 1110 mg/m <sup>3</sup>  | 0.352 |
| PROC10 - Roller application or brushing                                                                                                                                                          | Worker - dermal, long-term - systemic     | 2.743 mg/kg/d           | <0.01 |
| PROC10 - Roller application or brushing                                                                                                                                                          | Worker - combined, long-term - systemic   |                         | 0.358 |
| PROC11 - Non industrial spraying                                                                                                                                                                 | Worker - inhalative, long-term - systemic | 2220 mg/m <sup>3</sup>  | 0.703 |
| PROC11 - Non industrial spraying                                                                                                                                                                 | Worker - dermal, long-term - systemic     | 10.71 mg/kg/d           | 0.024 |
| PROC11 - Non industrial spraying                                                                                                                                                                 | Worker - combined, long-term - systemic   |                         | 0.727 |

|                                                                                               |                                           |                         |       |
|-----------------------------------------------------------------------------------------------|-------------------------------------------|-------------------------|-------|
| PROC13 - Treatment of articles by dipping and pouring                                         | Worker - inhalative, long-term - systemic | 554.8 mg/m <sup>3</sup> | 0.176 |
| PROC13 - Treatment of articles by dipping and pouring                                         | Worker - dermal, long-term - systemic     | 1.371 mg/kg/d           | <0.01 |
| PROC13 - Treatment of articles by dipping and pouring                                         | Worker - combined, long-term - systemic   |                         | 0.179 |
| PROC20 - Heat and pressure transfer fluids in dispersive, professional use but closed systems | Worker - inhalative, long-term - systemic | 110.9 mg/m <sup>3</sup> | 0.035 |
| PROC20 - Heat and pressure transfer fluids in dispersive, professional use but closed systems | Worker - dermal, long-term - systemic     | 0.342 mg/kg/d           | <0.01 |
| PROC20 - Heat and pressure transfer fluids in dispersive, professional use but closed systems | Worker - combined, long-term - systemic   |                         | 0.036 |

#### **Section 4 - Guidance to check compliance with the exposure scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. <http://www.ecetoc.org/tra>.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** DIMETHOXYMETHANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119664781-31-XXXX  
**CAS No** 109-87-5  
**EC No (EU Index No)** 203-714-2  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Cosmetics, personal care products ( Professional use )  
**Type** Worker  
**Main user group** Professional uses: Public domain (administration, education, entertainment, services, craftsmen)  
**Environmental release category(ies)** ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems ERC9a - Wide dispersive indoor use of substances in closed systems ERC9b - Wide dispersive outdoor use of substances in closed systems  
**Specific Environmental Release Category** CE SPERC 8a.1.a.v3 CE SPERC 8a.1.b.v3 CE SPERC 8a.1.c.v3 CE SPERC 8a.1.d.v3  
**Process category(ies)** ESVOc SpERC 8.6c.v2 ESVOc SpERC 9.6b.v2  
**Product category(ies)** PROC0 - Other Process  
**Sector(s) of use** PC39 - Cosmetics, personal care products  
 SU22 - Professional uses

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC8a - Wide dispersive indoor use of processing aids in open systems

- ERC8d - Wide dispersive outdoor use of processing aids in open systems

- ERC9a - Wide dispersive indoor use of substances in closed systems

- ERC9b - Wide dispersive outdoor use of substances in closed systems

**Specific Environmental Release Category** - CE SPERC 8a.1.a.v3

- CE SPERC 8a.1.b.v3

- CE SPERC 8a.1.c.v3

- CE SPERC 8a.1.d.v3

- ESVOc SpERC 8.6c.v2

- ESVOc SpERC 9.6b.v2

#### Product characteristics

|                                           |        |
|-------------------------------------------|--------|
| Physical form of product                  | Liquid |
| Vapour pressure                           | 40 kPa |
| Temperature associated to vapour pressure | 20 C   |

#### Conditions and measures related to municipal sewage treatment plant

|                                              |               |
|----------------------------------------------|---------------|
| Type                                         | Municipal STP |
| Assumed domestic sewage treatment plant flow | 2000 m3/d     |

**Conditions and measures related to external treatment of waste for disposal**

|          |                                                                                                          |
|----------|----------------------------------------------------------------------------------------------------------|
| Disposal | External treatment and disposal of waste should comply with applicable local and/or national regulations |
|----------|----------------------------------------------------------------------------------------------------------|

**Control of worker exposure**

|                             |                                                                   |
|-----------------------------|-------------------------------------------------------------------|
| Process category(ies)       | PROC0 - Other Process                                             |
| Title                       | Cosmetics                                                         |
| Covers concentrations up to | 100 %                                                             |
| Use frequency               | Covers daily exposures up to 8 hours (unless stated differently). |
| Indoor/Outdoor use          | Indoor use                                                        |
| Operational conditions      | Assumes process temperature up to 40 C                            |

**Section 3 - Exposure estimation**

**Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems**

**- ERC8d - Wide dispersive outdoor use of processing aids in open systems**

**- ERC9a - Wide dispersive indoor use of substances in closed systems**

**- ERC9b - Wide dispersive outdoor use of substances in closed systems**

**Specific Environmental Release Category - CE SPERC 8a.1.a.v3**

**- CE SPERC 8a.1.b.v3**

**- CE SPERC 8a.1.c.v3**

**- CE SPERC 8a.1.d.v3**

**- ESVOC SpERC 8.6c.v2**

**- ESVOC SpERC 9.6b.v2**

**Predicted No Effect Concentration (PNEC)**

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 14.58 mg/l  |
| Freshwater sediment        | 13.14 mg/kg |
| Marine water               | 1.477 mg/l  |
| Marine sediment            | 1.314 mg/kg |
| Soil                       | 4.654 mg/kg |
| Impact on Sewage Treatment | 10 mg/l     |

**Calculation method**

Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 0.00186 mg/l             | <0.01                             |
| Freshwater sediment         | 0.00774 mg/kg            | <0.01                             |
| Marine water                | 0.000182 mg/l            | <0.01                             |
| Marine sediment             | 0.000754 mg/kg           | <0.01                             |
| STP: Sewage Treatment Plant | 0.015 mg/l               | <0.01                             |
| Soil                        | 0.0000437 mg/kg          | <0.01                             |

**Derived No Effect Level (DNEL):**

|                                           |                        |
|-------------------------------------------|------------------------|
| Worker - dermal, long-term - systemic     | 17.9 mg/kg/d           |
| Worker - inhalative, long-term - systemic | 3160 mg/m <sup>3</sup> |

**Remarks**

No exposure assessment presented for human health.

**Section 4 - Guidance to check compliance with the exposure scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. <http://www.ecetoc.org/tra>.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** DIMETHOXYMETHANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119664781-31-XXXX  
**CAS No** 109-87-5  
**EC No (EU Index No)** 203-714-2  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Consumer use Biocidal Products (e.g. disinfectants, pest control)  
**Type** Consumer  
**Main user group** Consumer uses: Private households (= general public = consumers)  
**Environmental release category(ies)** ERC8a - Wide dispersive indoor use of processing aids in open systems  
**Product category(ies)** PC8 - Biocidal Products (e.g. disinfectants, pest control)  
**Sector(s) of use** SU21 - Consumer uses

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC8a - Wide dispersive indoor use of processing aids in open systems

**Covers concentrations up to** 50 %

#### Product characteristics

|                                           |        |
|-------------------------------------------|--------|
| Physical form of product                  | Liquid |
| Vapour pressure                           | 40 kPa |
| Temperature associated to vapour pressure | 20 C   |

#### Conditions and measures related to municipal sewage treatment plant

|                                              |               |
|----------------------------------------------|---------------|
| Type                                         | Municipal STP |
| Assumed domestic sewage treatment plant flow | 2000 m3/d     |

#### Control measures to prevent releases

|         |                       |
|---------|-----------------------|
| Remarks | No waste from process |
|---------|-----------------------|

#### Control of consumer exposure

|                                      |                                                                    |
|--------------------------------------|--------------------------------------------------------------------|
| Product categories [PC]              | PC8 - Biocidal Products (e.g. disinfectants, pest control)         |
| Covers concentrations up to          | 50%                                                                |
| Amounts used                         | 10 g/event                                                         |
| Exposure duration                    | 0.25 hr/event                                                      |
| Use frequency                        | Covers use up to 1 events per day<br>Covers use up to 0.33 minutes |
| Exposure route                       | Inhalation exposure                                                |
| Use in room with a volume of minimum | 58 m3                                                              |

|                                                                               |     |
|-------------------------------------------------------------------------------|-----|
| Minimum room ventilation rate for handling/application (air changes per hour) | 0.5 |
|-------------------------------------------------------------------------------|-----|

### Section 3 - Exposure estimation

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems

#### Predicted No Effect Concentration (PNEC)

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 14.58 mg/l  |
| Freshwater sediment        | 13.14 mg/kg |
| Marine water               | 1.477 mg/l  |
| Marine sediment            | 1.314 mg/kg |
| Soil                       | 4.654 mg/kg |
| Impact on Sewage Treatment | 10 mg/l     |

#### Calculation method

Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 0.00263 mg/l             | <0.01                             |
| Freshwater sediment         | 0.011 mg/kg              | <0.01                             |
| Marine water                | 0.000258 mg/l            | <0.01                             |
| Marine sediment             | 0.00107 mg/kg            | <0.01                             |
| STP: Sewage Treatment Plant | 0.022 mg/l               | <0.01                             |
| Soil                        | 0.0000641 mg/kg          | <0.01                             |

#### Derived No Effect Level (DNEL):

|                                             |                        |
|---------------------------------------------|------------------------|
| Consumer - oral, long-term - systemic       | 18.1 mg/kg/d           |
| Consumer - dermal, long-term - systemic     | 18.1 mg/kg/d           |
| Consumer - inhalative, long-term - systemic | 31.5 mg/m <sup>3</sup> |

#### Calculation method

The Consexpo model has been used to estimate consumer exposures unless otherwise indicated

| Product category(ies)                                      | Exposure route                              | predicted exposure level | Risk characterisation ratio (RCR) |
|------------------------------------------------------------|---------------------------------------------|--------------------------|-----------------------------------|
| PC8 - Biocidal Products (e.g. disinfectants, pest control) | Consumer - inhalative, long-term - systemic | 1.3 mg/m <sup>3</sup>    | <0.01                             |
| PC8 - Biocidal Products (e.g. disinfectants, pest control) | Consumer - dermal, long-term - systemic     | 0.65 mg/kg/d             | <0.01                             |
| PC8 - Biocidal Products (e.g. disinfectants, pest control) | Consumer - oral, long-term - systemic       | 0 mg/kg/d                | <0.01                             |
| PC8 - Biocidal Products (e.g. disinfectants, pest control) | Consumer - combined, long-term - systemic   |                          | <0.01                             |

### Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. <http://www.ecetoc.org/tra>.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** DIMETHOXYMETHANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119664781-31-XXXX  
**CAS No** 109-87-5  
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 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Consumer use Washing and cleaning products  
**Type** Consumer  
**Main user group** Consumer uses: Private households (= general public = consumers)  
**Environmental release category(ies)** ERC8a - Wide dispersive indoor use of processing aids in open systems  
**Specific Environmental Release Category** AISE SPERC 8a.1a.v3 AISE SPERC 8a.1b.v3 AISE SPERC 8a.1c.v3  
**Product category(ies)** PC35 - Washing and cleaning products (including solvent based products)  
**Sector(s) of use** SU21 - Consumer uses

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC8a - Wide dispersive indoor use of processing aids in open systems

**Specific Environmental Release Category** - AISE SPERC 8a.1a.v3

- AISE SPERC 8a.1b.v3

- AISE SPERC 8a.1c.v3

#### Product characteristics

|                                           |        |
|-------------------------------------------|--------|
| Physical form of product                  | Liquid |
| Vapour pressure                           | 40 kPa |
| Temperature associated to vapour pressure | 20 C   |

#### Conditions and measures related to municipal sewage treatment plant

|                                              |               |
|----------------------------------------------|---------------|
| Type                                         | Municipal STP |
| Assumed domestic sewage treatment plant flow | 2000 m3/d     |

#### Conditions and measures related to external treatment of waste for disposal

|          |                                                                            |
|----------|----------------------------------------------------------------------------|
| Disposal | Dispose of waste product or used containers according to local regulations |
|----------|----------------------------------------------------------------------------|

#### Control of consumer exposure

|                             |                                                                                                                              |
|-----------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Title                       | Cleaners, liquids (all purpose cleaners, sanitary products, floor cleaners, glass cleaners, carpet cleaners, metal cleaners) |
| Product categories [PC]     | PC35 - Washing and cleaning products (including solvent based products)                                                      |
| Covers concentrations up to | 10 %                                                                                                                         |
| Amounts used                | 110 g/event                                                                                                                  |

|                   |                                                                    |
|-------------------|--------------------------------------------------------------------|
| Exposure duration | 0.3 hr/event                                                       |
| Use frequency     | Covers use up to 1 events per day<br>Covers use up to 0.33 minutes |
| Exposure route    | Inhalation exposure                                                |

|                             |                                                                                    |
|-----------------------------|------------------------------------------------------------------------------------|
| Title                       | Cleaners, trigger sprays (all purpose cleaners, sanitary products, glass cleaners) |
| Product categories [PC]     | PC35 - Washing and cleaning products (including solvent based products)            |
| Covers concentrations up to | 25 %                                                                               |
| Amounts used                | 30 g/event                                                                         |
| Exposure duration           | 0.2 hr/event                                                                       |
| Use frequency               | Covers use up to 1 events per day<br>Covers use up to 0.33 minutes                 |
| Exposure route              | Inhalation exposure                                                                |

### Section 3 - Exposure estimation

**Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems**

**Specific Environmental Release Category - AISE SPERC 8a.1a.v3**

**- AISE SPERC 8a.1b.v3**

**- AISE SPERC 8a.1c.v3**

**Predicted No Effect Concentration (PNEC)**

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 14.58 mg/l  |
| Freshwater sediment        | 13.14 mg/kg |
| Marine water               | 1.477 mg/l  |
| Marine sediment            | 1.314 mg/kg |
| Soil                       | 4.654 mg/kg |
| Impact on Sewage Treatment | 10 mg/l     |

**Calculation method** Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 0.163 mg/l               | 0.011                             |
| Freshwater sediment         | 0.677 mg/kg              | 0.011                             |
| Marine water                | 0.016 mg/l               | 0.011                             |
| Marine sediment             | 0.068 mg/kg              | 0.011                             |
| STP: Sewage Treatment Plant | 1.626 mg/l               | <0.01                             |
| Soil                        | 0.00435 mg/kg            | <0.01                             |

**Derived No Effect Level (DNEL):**

|                                             |                        |
|---------------------------------------------|------------------------|
| Consumer - oral, long-term - systemic       | 18.1 mg/kg/d           |
| Consumer - dermal, long-term - systemic     | 18.1 mg/kg/d           |
| Consumer - inhalative, long-term - systemic | 31.5 mg/m <sup>3</sup> |

**Calculation method** The Consexpo model has been used to estimate consumer exposures unless otherwise indicated

| Product category(ies)                                                   | Exposure route                              | predicted exposure level | Risk characterisation ratio (RCR) |
|-------------------------------------------------------------------------|---------------------------------------------|--------------------------|-----------------------------------|
| PC35 - Washing and cleaning products (including solvent based products) | Consumer - inhalative, long-term - systemic | 466.1 mg/m <sup>3</sup>  | 0.832                             |
| PC35 - Washing and cleaning products (including solvent based products) | Consumer - dermal, long-term - systemic     | 14.29 mg/kg/d            | 0.089                             |
| PC35 - Washing and cleaning products (including solvent based products) | Consumer - oral, long-term - systemic       | 0 mg/kg/d                | <0.01                             |

|                                                                            |                                                |                         |       |
|----------------------------------------------------------------------------|------------------------------------------------|-------------------------|-------|
| PC35 - Washing and cleaning products<br>(including solvent based products) | Consumer - combined,<br>long-term - systemic   |                         | 0.922 |
| PC35 - Washing and cleaning products<br>(including solvent based products) | Consumer - inhalative,<br>long-term - systemic | 334.8 mg/m <sup>3</sup> | 0.598 |
| PC35 - Washing and cleaning products<br>(including solvent based products) | Consumer - dermal, long-term<br>- systemic     | 35.72 mg/kg/d           | 0.223 |
| PC35 - Washing and cleaning products<br>(including solvent based products) | Consumer - oral, long-term -<br>systemic       | 0 mg/kg/d               | <0.01 |
| PC35 - Washing and cleaning products<br>(including solvent based products) | Consumer - combined,<br>long-term - systemic   |                         | 0.821 |

#### Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. <http://www.ecetoc.org/tra>.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** DIMETHOXYMETHANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119664781-31-XXXX  
**CAS No** 109-87-5  
**EC No (EU Index No)** 203-714-2  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Consumer use Polishes and wax blends  
**Type** Consumer  
**Main user group** Consumer uses: Private households (= general public = consumers)  
**Environmental release category(ies)** ERC8a - Wide dispersive indoor use of processing aids in open systems  
**Product category(ies)** PC31 - Polishes and wax blends  
**Sector(s) of use** SU21 - Consumer uses

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC8a - Wide dispersive indoor use of processing aids in open systems

#### Product characteristics

|                                           |        |
|-------------------------------------------|--------|
| Physical form of product                  | Liquid |
| Vapour pressure                           | 40 kPa |
| Temperature associated to vapour pressure | 20 C   |

#### Conditions and measures related to municipal sewage treatment plant

|                                              |               |
|----------------------------------------------|---------------|
| Type                                         | Municipal STP |
| Assumed domestic sewage treatment plant flow | 2000 m3/d     |

#### Conditions and measures related to external treatment of waste for disposal

|          |                                                                            |
|----------|----------------------------------------------------------------------------|
| Disposal | Dispose of waste product or used containers according to local regulations |
|----------|----------------------------------------------------------------------------|

#### Control of consumer exposure

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| Title                       | Polishes and wax blends                                                |
| Product categories [PC]     | PC31 - Polishes and wax blends                                         |
| Covers concentrations up to | 10 %                                                                   |
| Amounts used                | 135 g/event                                                            |
| Exposure duration           | 1 hr/event                                                             |
| Use frequency               | Covers use up to 1 events per day<br>Covers use up to 2 weeks per year |
| Exposure route              | Inhalation exposure                                                    |

### Section 3 - Exposure estimation

**Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems**

**Predicted No Effect Concentration (PNEC)**

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 14.58 mg/l  |
| Freshwater sediment        | 13.14 mg/kg |
| Marine water               | 1.477 mg/l  |
| Marine sediment            | 1.314 mg/kg |
| Soil                       | 4.654 mg/kg |
| Impact on Sewage Treatment | 10 mg/l     |

**Calculation method** Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 0.000887 mg/l            | <0.01                             |
| Freshwater sediment         | 0.00369 mg/kg            | <0.01                             |
| Marine water                | 0.0000841 mg/l           | <0.01                             |
| Marine sediment             | 0.000349 mg/kg           | <0.01                             |
| STP: Sewage Treatment Plant | 0.00497 mg/l             | <0.01                             |
| Soil                        | 0.0000177mg/kg           | <0.01                             |

**Derived No Effect Level (DNEL):**

|                                             |                        |
|---------------------------------------------|------------------------|
| Consumer - oral, long-term - systemic       | 18.1 mg/kg/d           |
| Consumer - dermal, long-term - systemic     | 18.1 mg/kg/d           |
| Consumer - inhalative, long-term - systemic | 31.5 mg/m <sup>3</sup> |

**Calculation method** The Consexpo model has been used to estimate consumer exposures unless otherwise indicated

| Product category(ies)          | Exposure route                              | predicted exposure level | Risk characterisation ratio (RCR) |
|--------------------------------|---------------------------------------------|--------------------------|-----------------------------------|
| PC31 - Polishes and wax blends | Consumer - inhalative, long-term - systemic | 421.8 mg/m <sup>3</sup>  | 0.753                             |
| PC31 - Polishes and wax blends | Consumer - dermal, long-term - systemic     | 7.147 mg/kg/d            | 0.045                             |
| PC31 - Polishes and wax blends | Consumer - oral, long-term - systemic       | 0 mg/kg/d                | <0.01                             |
| PC31 - Polishes and wax blends | Consumer - combined, long-term - systemic   |                          | 0.798                             |

### Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. <http://www.ecetoc.org/tra>.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** DIMETHOXYMETHANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119664781-31-XXXX  
**CAS No** 109-87-5  
**EC No (EU Index No)** 203-714-2  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Consumer use Coatings and paints, thinners, paint removers Paint remover  
**Type** Consumer  
**Main user group** Consumer uses: Private households (= general public = consumers)  
**Environmental release category(ies)** ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems  
**Specific Environmental Release Category** CEPE SPERC 8a.1a.v2 CEPE SPERC 8d.1a.v2  
**Product category(ies)** PC9a - Coatings and paints, thinners, paint removers  
**Sector(s) of use** SU21 - Consumer uses

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC8a - Wide dispersive indoor use of processing aids in open systems  
 - ERC8d - Wide dispersive outdoor use of processing aids in open systems  
**Specific Environmental Release Category** - **CEPE SPERC 8a.1a.v2**  
**- CEPE SPERC 8d.1a.v2**

#### Product characteristics

|                                           |        |
|-------------------------------------------|--------|
| Physical form of product                  | Liquid |
| Vapour pressure                           | 40 kPa |
| Temperature associated to vapour pressure | 20 C   |

#### Conditions and measures related to municipal sewage treatment plant

|                                              |               |
|----------------------------------------------|---------------|
| Type                                         | Municipal STP |
| Assumed domestic sewage treatment plant flow | 2000 m3/d     |

#### Conditions and measures related to external treatment of waste for disposal

|          |                                                                            |
|----------|----------------------------------------------------------------------------|
| Disposal | Dispose of waste product or used containers according to local regulations |
|----------|----------------------------------------------------------------------------|

#### Control of consumer exposure

|                             |                                                      |
|-----------------------------|------------------------------------------------------|
| Product categories [PC]     | PC9a - Coatings and paints, thinners, paint removers |
| Covers concentrations up to | 50 %                                                 |
| Amounts used                | 491 g/event                                          |
| Exposure duration           | 2 hr/event                                           |

|                |                                                                        |
|----------------|------------------------------------------------------------------------|
| Use frequency  | Covers use up to 1 events per day<br>Covers use up to 2 weeks per year |
| Exposure route | Inhalation exposure                                                    |

### Section 3 - Exposure estimation

**Environmental release category(ies)** - ERC8a - Wide dispersive indoor use of processing aids in open systems  
- ERC8d - Wide dispersive outdoor use of processing aids in open systems  
**Specific Environmental Release Category** - CEPE SPERC 8a.1a.v2  
- CEPE SPERC 8d.1a.v2

#### Predicted No Effect Concentration (PNEC)

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 14.58 mg/l  |
| Freshwater sediment        | 13.14 mg/kg |
| Marine water               | 1.477 mg/l  |
| Marine sediment            | 1.314 mg/kg |
| Soil                       | 4.654 mg/kg |
| Impact on Sewage Treatment | 10 mg/l     |

#### Calculation method

Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 0.000413 mg/l            | <0.01                             |
| Freshwater sediment         | 0.00172 mg/kg            | <0.01                             |
| Marine water                | 0.0000367 mg/l           | <0.01                             |
| Marine sediment             | 0.000152 mg/kg           | <0.01                             |
| STP: Sewage Treatment Plant | 0.000224 mg/l            | <0.01                             |
| Soil                        | 0.00000498 mg/kg         | <0.01                             |

#### Derived No Effect Level (DNEL):

|                                             |                        |
|---------------------------------------------|------------------------|
| Consumer - oral, long-term - systemic       | 18.1 mg/kg/d           |
| Consumer - dermal, long-term - systemic     | 18.1 mg/kg/d           |
| Consumer - inhalative, long-term - systemic | 31.5 mg/m <sup>3</sup> |

#### Calculation method

The Consexpo model has been used to estimate consumer exposures unless otherwise indicated

| Product category(ies)                                | Exposure route                              | predicted exposure level | Risk characterisation ratio (RCR) |
|------------------------------------------------------|---------------------------------------------|--------------------------|-----------------------------------|
| PC9a - Coatings and paints, thinners, paint removers | Consumer - inhalative, long-term - systemic | 23.82 mg/m <sup>3</sup>  | 0.043                             |
| PC9a - Coatings and paints, thinners, paint removers | Consumer - dermal, long-term - systemic     | 2.46 mg/kg/d             | 0.015                             |
| PC9a - Coatings and paints, thinners, paint removers | Consumer - oral, long-term - systemic       | 0 mg/kg/d                | <0.01                             |
| PC9a - Coatings and paints, thinners, paint removers | Consumer - combined, long-term - systemic   |                          | 0.058                             |

### Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. <http://www.ecetoc.org/tra>.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** DIMETHOXYMETHANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119664781-31-XXXX  
**CAS No** 109-87-5  
**EC No (EU Index No)** 203-714-2  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Consumer use Adhesives, sealants  
**Type** Consumer  
**Main user group** Consumer uses: Private households (= general public = consumers)  
**Environmental release category(ies)** ERC8a - Wide dispersive indoor use of processing aids in open systems  
**Specific Environmental Release Category** FEICA SPERC 8a.3.v3  
**Product category(ies)** PC1 - Adhesives, sealants  
**Sector(s) of use** SU21 - Consumer uses

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC8a - Wide dispersive indoor use of processing aids in open systems  
**Specific Environmental Release Category** - FEICA SPERC 8a.3.v3

#### Product characteristics

|                                           |        |
|-------------------------------------------|--------|
| Physical form of product                  | Liquid |
| Vapour pressure                           | 40 kPa |
| Temperature associated to vapour pressure | 20 C   |

#### Conditions and measures related to municipal sewage treatment plant

|                                              |               |
|----------------------------------------------|---------------|
| Type                                         | Municipal STP |
| Assumed domestic sewage treatment plant flow | 2000 m3/d     |

#### Conditions and measures related to external treatment of waste for disposal

|          |                                                                            |
|----------|----------------------------------------------------------------------------|
| Disposal | Dispose of waste product or used containers according to local regulations |
|----------|----------------------------------------------------------------------------|

#### Control of consumer exposure

|                             |                                                                               |
|-----------------------------|-------------------------------------------------------------------------------|
| Product categories [PC]     | PC9a - Coatings and paints, thinners, paint removers                          |
| Covers concentrations up to | 25 %                                                                          |
| Amounts used                | 128 g/event                                                                   |
| Exposure duration           | 4 hr/event                                                                    |
| Use frequency               | Covers use up to 1 events per day<br>Covers frequency up to once in two weeks |

|                |                     |
|----------------|---------------------|
| Exposure route | Inhalation exposure |
|----------------|---------------------|

### Section 3 - Exposure estimation

**Environmental release category(ies)** - ERC8a - Wide dispersive indoor use of processing aids in open systems  
**Specific Environmental Release Category** - FEICA SPERC 8a.3.v3

#### Predicted No Effect Concentration (PNEC)

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 14.58 mg/l  |
| Freshwater sediment        | 13.14 mg/kg |
| Marine water               | 1.477 mg/l  |
| Marine sediment            | 1.314 mg/kg |
| Soil                       | 4.654 mg/kg |
| Impact on Sewage Treatment | 10 mg/l     |

#### Calculation method Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 0.000398 mg/l            | <0.01                             |
| Freshwater sediment         | 0.00165 mg/kg            | <0.01                             |
| Marine water                | 0.0000352 mg/l           | <0.01                             |
| Marine sediment             | 0.000146 mg/kg           | <0.01                             |
| STP: Sewage Treatment Plant | 0.0000745 mg/l           | <0.01                             |
| Soil                        | 0.00000458 mg/kg         | <0.01                             |

#### Derived No Effect Level (DNEL):

|                                             |                        |
|---------------------------------------------|------------------------|
| Consumer - oral, long-term - systemic       | 18.1 mg/kg/d           |
| Consumer - dermal, long-term - systemic     | 18.1 mg/kg/d           |
| Consumer - inhalative, long-term - systemic | 31.5 mg/m <sup>3</sup> |

#### Calculation method The Consexpo model has been used to estimate consumer exposures unless otherwise indicated

| Product category(ies)     | Exposure route                              | predicted exposure level | Risk characterisation ratio (RCR) |
|---------------------------|---------------------------------------------|--------------------------|-----------------------------------|
| PC1 - Adhesives, sealants | Consumer - inhalative, long-term - systemic | 470.5 mg/m <sup>3</sup>  | 0.84                              |
| PC1 - Adhesives, sealants | Consumer - dermal, long-term - systemic     | 0.149 mg/kg/d            | <0.01                             |
| PC1 - Adhesives, sealants | Consumer - oral, long-term - systemic       | 0 mg/kg/d                | <0.01                             |
| PC1 - Adhesives, sealants | Consumer - combined, long-term - systemic   |                          | 0.841                             |

### Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. <http://www.ecetoc.org/tra>.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** DIMETHOXYMETHANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119664781-31-XXXX  
**CAS No** 109-87-5  
**EC No (EU Index No)** 203-714-2  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Consumer use Coatings and paints, thinners, paint removers paint  
**Type** Consumer  
**Main user group** Consumer uses: Private households (= general public = consumers)  
**Environmental release category(ies)** ERC8a - Wide dispersive indoor use of processing aids in open systems ERC8d - Wide dispersive outdoor use of processing aids in open systems  
**Specific Environmental Release Category** CEPE SPERC 8a.1a.v2 CEPE SPERC 8d.1a.v2  
**Product category(ies)** PC9a - Coatings and paints, thinners, paint removers  
**Sector(s) of use** SU21 - Consumer uses

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC8a - Wide dispersive indoor use of processing aids in open systems  
 - ERC8d - Wide dispersive outdoor use of processing aids in open systems  
**Specific Environmental Release Category** - CEPE SPERC 8a.1a.v2  
- CEPE SPERC 8d.1a.v2

#### Product characteristics

|                                           |        |
|-------------------------------------------|--------|
| Physical form of product                  | Liquid |
| Vapour pressure                           | 40 kPa |
| Temperature associated to vapour pressure | 20 C   |

#### Conditions and measures related to municipal sewage treatment plant

|                                              |               |
|----------------------------------------------|---------------|
| Type                                         | Municipal STP |
| Assumed domestic sewage treatment plant flow | 2000 m3/d     |

#### Conditions and measures related to external treatment of waste for disposal

|          |                                                                            |
|----------|----------------------------------------------------------------------------|
| Disposal | Dispose of waste product or used containers according to local regulations |
|----------|----------------------------------------------------------------------------|

#### Control of consumer exposure

|                             |                                                      |
|-----------------------------|------------------------------------------------------|
| Title                       | Aerosol spray can Indoor use                         |
| Product categories [PC]     | PC9a - Coatings and paints, thinners, paint removers |
| Covers concentrations up to | 4 %                                                  |
| Amounts used                | 300 g/event                                          |

|                             |                                                                        |
|-----------------------------|------------------------------------------------------------------------|
| Exposure duration           | 0.33 hr/event                                                          |
| Use frequency               | Covers use up to 1 events per day<br>Covers use up to 2 weeks per year |
| Exposure route              | Inhalation exposure                                                    |
| Title                       | Aerosol spray can Outdoor use                                          |
| Product categories [PC]     | PC9a - Coatings and paints, thinners, paint removers                   |
| Covers concentrations up to | 25 %                                                                   |
| Amounts used                | 300 g/event                                                            |
| Exposure duration           | 0.33 hr/event                                                          |
| Use frequency               | Covers use up to 1 events per day<br>Covers use up to 2 weeks per year |
| Exposure route              | Inhalation exposure                                                    |

### Section 3 - Exposure estimation

**Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems**  
**- ERC8d - Wide dispersive outdoor use of processing aids in open systems**  
**Specific Environmental Release Category - CEPE SPERC 8a.1a.v2**  
**- CEPE SPERC 8d.1a.v2**

#### Predicted No Effect Concentration (PNEC)

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 14.58 mg/l  |
| Freshwater sediment        | 13.14 mg/kg |
| Marine water               | 1.477 mg/l  |
| Marine sediment            | 1.314 mg/kg |
| Soil                       | 4.654 mg/kg |
| Impact on Sewage Treatment | 10 mg/l     |

#### Calculation method Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 0.000401 mg/l            | <0.01                             |
| Freshwater sediment         | 0.00166 mg/kg            | <0.01                             |
| Marine water                | 0.0000354 mg/l           | <0.01                             |
| Marine sediment             | 0.000147 mg/kg           | <0.01                             |
| STP: Sewage Treatment Plant | 0.0000993 mg/l           | <0.01                             |
| Soil                        | 0.00000465 mg/kg         | <0.01                             |

#### Derived No Effect Level (DNEL):

|                                             |                        |
|---------------------------------------------|------------------------|
| Consumer - oral, long-term - systemic       | 18.1 mg/kg/d           |
| Consumer - dermal, long-term - systemic     | 18.1 mg/kg/d           |
| Consumer - inhalative, long-term - systemic | 31.5 mg/m <sup>3</sup> |

#### Calculation method The Consexpo model has been used to estimate consumer exposures unless otherwise indicated

| Product category(ies)                                | Exposure route                              | predicted exposure level | Risk characterisation ratio (RCR) |
|------------------------------------------------------|---------------------------------------------|--------------------------|-----------------------------------|
| PC9a - Coatings and paints, thinners, paint removers | Consumer - inhalative, long-term - systemic | 500.8 mg/m <sup>3</sup>  | 0.894                             |
| PC9a - Coatings and paints, thinners, paint removers | Consumer - dermal, long-term - systemic     | 2.859 mg/kg/d            | 0.018                             |
| PC9a - Coatings and paints, thinners,                | Consumer - oral, long-term -                | 0 mg/kg/d                | <0.01                             |

|                                                      |                                             |                         |       |
|------------------------------------------------------|---------------------------------------------|-------------------------|-------|
| paint removers                                       | systemic                                    |                         |       |
| PC9a - Coatings and paints, thinners, paint removers | Consumer - combined, long-term - systemic   |                         | 0.912 |
| PC9a - Coatings and paints, thinners, paint removers | Consumer - inhalative, long-term - systemic | 410.9 mg/m <sup>3</sup> | 0.734 |
| PC9a - Coatings and paints, thinners, paint removers | Consumer - dermal, long-term - systemic     | 17.86                   | 0.112 |
| PC9a - Coatings and paints, thinners, paint removers | Consumer - oral, long-term - systemic       | 0 mg/kg/d               | <0.01 |
| PC9a - Coatings and paints, thinners, paint removers | Consumer - combined, long-term - systemic   |                         | 0.846 |

#### **Section 4 - Guidance to check compliance with the exposure scenario**

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMs or a site-specific chemical safety assessment is required. For scaling see. <http://www.ecetoc.org/tra>.

## Annex to the Safety Data Sheet according to Regulation (EC) No 1907/2006 [REACH]

**Chemical name** DIMETHOXYMETHANE  
**Pure substance/mixture** Substance  
**REACH registration number** 01-2119664781-31-XXXX  
**CAS No** 109-87-5  
**EC No (EU Index No)** 203-714-2  
**Supplier** Univar Solutions UK Ltd  
 Aquarius House  
 6 Mid Point Business Park  
 Bradford  
 GBR  
  
**Non-Emergency Telephone Number** +44 1274 267300 / +44 1274 267306  
  
**E-mail address** SDS.EMEA@univarsolutions.com

### Section 1 - Title

**Title** Cosmetics, personal care products ( Professional use )  
**Type** Consumer  
**Main user group** Consumer uses: Private households (= general public = consumers)  
**Environmental release category(ies)** ERC8a - Wide dispersive indoor use of processing aids in open systems  
**Specific Environmental Release Category** CE SPERC 8a.1.a.v3 CE SPERC 8a.1.b.v3 CE SPERC 8a.1.c.v3 CE SPERC 8a.1.d.v3  
**Product category(ies)** PC39 - Cosmetics, personal care products  
**Sector(s) of use** SU21 - Consumer uses

### Section 2 - Operational conditions and risk management measures

#### Section 2.1 - Control of environmental exposure

**Environmental release category(ies)** - ERC8a - Wide dispersive indoor use of processing aids in open systems

**Specific Environmental Release Category** - CE SPERC 8a.1.a.v3

- CE SPERC 8a.1.b.v3

- CE SPERC 8a.1.c.v3

- CE SPERC 8a.1.d.v3

#### Product characteristics

|                                           |        |
|-------------------------------------------|--------|
| Physical form of product                  | Liquid |
| Vapour pressure                           | 40 kPa |
| Temperature associated to vapour pressure | 20 C   |

#### Conditions and measures related to municipal sewage treatment plant

|                                              |               |
|----------------------------------------------|---------------|
| Type                                         | Municipal STP |
| Assumed domestic sewage treatment plant flow | 2000 m3/d     |

#### Conditions and measures related to external treatment of waste for disposal

|          |                                                                            |
|----------|----------------------------------------------------------------------------|
| Disposal | Dispose of waste product or used containers according to local regulations |
|----------|----------------------------------------------------------------------------|

#### Control of consumer exposure

|                             |                                          |
|-----------------------------|------------------------------------------|
| Product categories [PC]     | PC39 - Cosmetics, personal care products |
| Covers concentrations up to | 100 %                                    |
| Use frequency               | Covers exposure up to 1 events per day   |

### Section 3 - Exposure estimation

Environmental release category(ies) - ERC8a - Wide dispersive indoor use of processing aids in open systems

Specific Environmental Release Category - CE SPERC 8a.1.a.v3

- CE SPERC 8a.1.b.v3

- CE SPERC 8a.1.c.v3

- CE SPERC 8a.1.d.v3

**Predicted No Effect Concentration  
(PNEC)**

|                            |             |
|----------------------------|-------------|
| Freshwater                 | 14.58 mg/l  |
| Freshwater sediment        | 13.14 mg/kg |
| Marine water               | 1.477 mg/l  |
| Marine sediment            | 1.314 mg/kg |
| Soil                       | 4.654 mg/kg |
| Impact on Sewage Treatment | 10 mg/l     |

**Calculation method** Used EUSES model

| Environment                 | predicted exposure level | Risk characterisation ratio (RCR) |
|-----------------------------|--------------------------|-----------------------------------|
| Freshwater                  | 0.00125 mg/l             | <0.01                             |
| Freshwater sediment         | 0.00519 mg/kg            | <0.01                             |
| Marine water                | 0.00012 mg/l             | <0.01                             |
| Marine sediment             | 0.0005 mg/kg             | <0.01                             |
| STP: Sewage Treatment Plant | 0.00859 mg/l             | <0.01                             |
| Soil                        | 0.0000273 mg/kg          | <0.01                             |

**Derived No Effect Level (DNEL):**

|                                             |                        |
|---------------------------------------------|------------------------|
| Consumer - oral, long-term - systemic       | 18.1 mg/kg/d           |
| Consumer - dermal, long-term - systemic     | 18.1 mg/kg/d           |
| Consumer - inhalative, long-term - systemic | 31.5 mg/m <sup>3</sup> |

**Remarks** No exposure assessment presented for human health.

### Section 4 - Guidance to check compliance with the exposure scenario

Guidance is based on assumed operating conditions which may not be applicable to all sites; thus, scaling may be necessary to define appropriate site-specific risk management measures. If scaling reveals a condition of unsafe use (i.e., RCRs > 1), additional RMMS or a site-specific chemical safety assessment is required. For scaling see. <http://www.ecetoc.org/tra>.