SAFETY DATA SHEET

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

Supercedes date 14-Oct-2019 **Revision date** 19-Jun-2026 **Revision Number** 8

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

1.1. Product identifier

Product Code(s) 12882

Safety data sheet number 12882

Product Name METHYLAL

EC Number 203-714-2

CAS No 109-87-5

Synonyms METHYLAL TECHNICAL GRADE, METHYLAL TECH CIR-MB, METHYLAL TECH BCIRMB

Pure substance/mixture Substance

Contains METHANOL

Molecular weight 76.08

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

Recommended use

Solvent
Surface coating
Industrial application
Paint remover
Paint thinner
Laboratory reagent
Blowing agent
Insecticide
Washing and cleaning agent
Adhesives and/or sealants
For further information, see attached Exposure Scenario

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)
Acute toxicity - Oral	Category 4 - (H302)
Specific target organ toxicity — single exposure	Category 2 - (H371)

2.2. Label elements

Contains METHANOL

Signal word
Danger

Hazard statements
H302 - Harmful if swallowed
H371 - May cause damage to organs
H225 - Highly flammable liquid and vapour

Precautionary statements
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P264 - Wash face, hands and any exposed skin thoroughly after handling
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 109-87-5	90 - 100%	203-714-2	-	Flam. Liq. 2 (H225)	-	-	-

METHANOL 67-56-1	0 - 10%	200-659-6 (603-001-00 -X)	-	Flam. Liq. 2 (H225) Acute Tox. 3 (H301) Acute Tox. 3 (H311) Acute Tox. 3 (H331) STOT SE 1 (H370)	STOT SE 1 :: C>=10% STOT SE 2 :: 3%<=C<10%	-	-

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

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice Show this safety data sheet to the doctor in attendance.

Inhalation Remove to fresh air. IF exposed or concerned: Get medical advice/attention.

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. If symptoms persist, call a doctor.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If symptoms persist, call a doctor.

Ingestion Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a doctor.

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

Ingestion Harmful if swallowed

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 (CO2). 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

Personal precautions	Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges.
Other information	Ventilate the area. Refer to protective measures listed in Sections 7 and 8.
For emergency responders	Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions	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

Methods for containment	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.
Methods for cleaning up	Take precautionary measures against static discharges. Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers.
Prevention of secondary hazards	Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Reference to other sections	See section 8 for more information. See section 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling	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.
General hygiene considerations	Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static

electricity). Keep in properly labelled containers. Do not store near combustible materials. Store in accordance with the particular national regulations.

7.3. Specific end use(s)

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

Risk Management Methods (RMM) 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 109-87-5	TWA: 1000 ppm TWA: 3160 mg/m³ STEL: 1250 ppm STEL: 3950 mg/m³
METHANOL 67-56-1	TWA: 200 ppm TWA: 266 mg/m³ STEL: 250 ppm STEL: 333 mg/m³ Sk*

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 109-87-5		17.9 mg/kg bw/day [4] [6]	126.6 mg/m³ [4] [6]
METHANOL 67-56-1		20 mg/kg bw/day [4] [6] 20 mg/kg bw/day [4] [7]	130 mg/m³ [4] [6] 130 mg/m³ [4] [7] 130 mg/m³ [5] [6] 130 mg/m³ [5] [7]

[4] Systemic health effects.
[5] Local health effects.
[6] Long term.
[7] Short term.

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
DIMETHOXYMETHANE 109-87-5	18.1 mg/kg bw/day [4] [6]		31.5 mg/m³ [4] [6]
METHANOL 67-56-1	4 mg/kg bw/day [4] [6] 4 mg/kg bw/day [4] [7]	4 mg/kg bw/day [4] [6] 4 mg/kg bw/day [4] [7]	26 mg/m³ [4] [6] 26 mg/m³ [4] [7] 26 mg/m³ [5] [6] 26 mg/m³ [5] [7]

[4] Systemic health effects.
[5] Local health effects.
[6] Long term.
[7] Short term.

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
DIMETHOXYMETHANE 109-87-5	14.577 mg/L		1.477 mg/L		
METHANOL 67-56-1	20.8 mg/L	1540 mg/L	2.08 mg/L		

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
DIMETHOXYMETHANE 109-87-5	13.135 mg/kg sediment dw	1.3135 mg/kg dwt	10 g/L	4.6538 mg/kg soil dw	
METHANOL 67-56-1	77 mg/kg sediment dw	7.7 mg/kg sediment dw	100 mg/L	100 mg/kg soil 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
Short term	Polyvinyl chloride (PVC)	1.2 mm	> 60.0 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.

Particulate filter P3.

General hygiene considerations Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. 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	Pungent.
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 mm²/s	20.0 °C.
Dynamic viscosity	0.325 mPa s	@ 20.0 °C.
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	No information available	
Oxidising properties	No information available	

9.2. Other information

Molecular weight	76.08
Refractive Index	1.353 0.11 (diethyl ether = 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.

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 May cause slight irritation.

Ingestion Harmful if swallowed.

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
METHANOL	300 mg/kg	300 mg/kg	3 mg/L

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

Skin corrosion/irritation No information available.

METHANOL (67-56-1)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rabbit	Dermal			Mild skin irritant Prolonged contact may cause slight skin irritation with local redness

Serious eye damage/eye irritation No information available.

METHANOL (67-56-1)

Method	Species	Exposure route	Effective dose	Exposure time	Results
	Rabbit	eye			May cause eye irritation

Respiratory or skin sensitisation No information available.

METHANOL (67-56-1)

Method	Species	Exposure route	Results
OECD Test No. 406: Skin Sensitisation	Guinea pig	Dermal	No sensitisation responses were observed

Germ cell mutagenicity No information available.

Component Information
METHANOL (67-56-1)

Method	Species	Results
OECD Test No. 471: Bacterial Reverse Mutation Test	in vitro Ames Test Salmonella typhimurium	Negative
OECD Test No. 476: In Vitro Mammalian Cell Gene Mutation Tests using the Hprt and xprt genes	in vitro Chinese hamster fibroblasts	Negative
OECD Test No. 474: Mammalian Erythrocyte Micronucleus Test	in vivo Mouse	Negative

Carcinogenicity No information available.

Component Information
METHANOL (67-56-1)

Method	Species	Results
		Did not cause cancer in laboratory animals.

Reproductive toxicity No information available.

METHANOL (67-56-1)

Method	Species	Results
		In animal studies, did not interfere with reproduction

STOT - single exposure May cause damage to organs.

METHANOL (67-56-1)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					May cause damage to organs Eyes Central nervous system

STOT - repeated exposure No information available.

Component Information
METHANOL (67-56-1)

Method	Species	Exposure route	Effective dose	Exposure time	Results
					Methanol is highly toxic to humans and may cause central nervous system effects, visual disturbances up to blindness, metabolic acidosis, and degenerative damage to other organs including liver, kidney, and heart.

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	

METHANOL (67-56-1)

Method	Species	Endpoint type	Effective dose	Exposure time	Results
Acute toxicity	Lepomis macrochirus	LC50	15400 mg/L	96 hours	
Acute toxicity	Daphnia magna	LC50	> 10000 mg/L	48 hours	
OECD Test No. 201: Freshwater Algae and Cyanobacteria, Growth Inhibition Test or Equivalent.	Pseudokirchneriella subcapitata	ErC50	22000 mg/L	96 days	
OECD Test No. 209: Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation)	activated sludge	IC50	> 1000 mg/L	3 hours	
	Oryzias latipes (Ricefish)	NOEC	15800 mg/L	200 hours	

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
DIMETHOXYMETHANE	-	LC50: 6260 - 7800mg/L (96h, Pimephales	-	-

		promelas)		

12.2. Persistence and degradability

Persistence and degradability No information available.

METHANOL (67-56-1)

Method	Exposure time	Value	Results
OECD Test No. 301C: Ready Biodegradability: Modified MITI Test (I) (TG 301 C)	14 days	Biodegradation 92 %	Readily biodegradable

12.3. Bioaccumulative potential

Bioaccumulation No information available.

Component Information

Chemical name	Partition coefficient
DIMETHOXYMETHANE	0
METHANOL	-0.77

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
METHANOL	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).

Chemical name	Restricted substance per REACH Annex XVII	Substance subject to authorisation per REACH Annex XIV
METHANOL - 67-56-1	69, 75.	-

Persistent Organic Pollutants
Not applicable

Export Notification requirements
Not applicable

Named dangerous substances per COMAH Regulations 2015 (as amended)

Chemical name	Lower-tier requirements (tons)	Upper-tier requirements (tons)
METHANOL - 67-56-1	500	5000

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

TSCA	Contact supplier for inventory compliance status
DSL/NDSL	Contact supplier for inventory compliance status
EINECS/ELINCS	Contact supplier for inventory compliance status
ENCS	Contact supplier for inventory compliance status
IECSC	Contact supplier for inventory compliance status
KECI	Contact supplier for inventory compliance status
PICCS	Contact supplier for inventory compliance status
AIIC	Contact supplier for inventory compliance status
NZIoC	Contact supplier for inventory compliance status

Legend:
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances
AIIC - Australian Inventory of Industrial Chemicals
NZIoC - 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
H301 - Toxic if swallowed
H311 - Toxic in contact with skin
H331 - Toxic if inhaled
H370 - Causes damage to organs

Legend
SVHC: Substances of Very High Concern for Authorisation:

Legend Section 8: Exposure controls/personal protection

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
+	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) (AEGL(s))
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

Supercedes date 14-Oct-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 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 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) 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/m³

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/m³	<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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	<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/m³	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

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) 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)	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 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)	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) 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)	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) 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)	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) 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) 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)	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) 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) 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 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) 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/m³

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/m³	<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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	<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/m³	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/m³	<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/m³	<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/m³	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/m³	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/m³	<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/m³	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	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/m³

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/m³	<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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	<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	Worker - combined, long-term		<0.01

likelihood of exposure	- systemic		
PROC2 - Use in closed, continuous process with occasional controlled exposure	Worker - inhalative, long-term - systemic	55.48 mg/m³	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) 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)	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) 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 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) 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) 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 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) 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 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) 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	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^3

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^3	<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/m³	<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/m³	<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/m³	<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/m³	<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/m³	<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/m³	<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/m³	<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/m³	<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/m³	<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/m³	<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/m³

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/m³	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/m³	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/m³	<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/m³	<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/m³	<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/m³	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/m³	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/m³	<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/m³	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/m³	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]

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 ERC6c - Industrial use of monomers for manufacture of thermoplastics ERC6d - Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers
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) 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 PROC14 - Production of preparations or articles by tableting, compression, extrusion, pelettising 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	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 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) 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) 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) 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)	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) 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)	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) 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)	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) 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)	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)	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)

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	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):

Worker - dermal, long-term - systemic	17.9 mg/kg/d
Worker - inhalative, long-term - systemic	126.6 mg/m³

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/m³	<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/m³	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/m³	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/m³	<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/m³	<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/m³	<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/m³	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/m³	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/m³	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/m³	<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/m³	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/m³	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/m³	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/m³	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/m³	<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/m³	<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/m³	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/m³	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) 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 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) 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 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	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

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/m³

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/m³	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/m³	<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/m³	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/m³	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/m³	0.018
PROC2 - Use in closed, continuous	Worker - dermal, long-term -	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	<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

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

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

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

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

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

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) 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)	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

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

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

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

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 %

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

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

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

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	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/m³

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/m³	<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/m³	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/m³	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/m³	<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/m³	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/m³	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/m³	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/m³	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/m³	<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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	<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/m³	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/m³	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/m³	<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^3	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/m³

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/m³	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
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 (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) 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	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) 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 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	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 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)	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) 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	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)	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) 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)	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 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 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 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) - 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)

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	0.000394 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):

Worker - dermal, long-term - systemic	17.9 mg/kg/d
Worker - inhalative, long-term - systemic	3160 mg/m³

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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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

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	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) 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)	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) 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)	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) 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

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/m³

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/m³	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/m³	0.176
PROC8b - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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^3

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^3	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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/m³	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 ESVOC SpERC 8.6c.v2 ESVOC SpERC 9.6b.v2
Process category(ies)	PROC0 - Other Process
Product category(ies)	PC39 - Cosmetics, personal care 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 - 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/m³

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.

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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 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^3

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^3	<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
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 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 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 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/m³

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/m³	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 (including solvent based products)	Consumer - combined, long-term - systemic		0.922
PC35 - Washing and cleaning products (including solvent based products)	Consumer - inhalative, long-term - systemic	334.8 mg/m^3	0.598
PC35 - Washing and cleaning products (including solvent based products)	Consumer - dermal, long-term - systemic	35.72 mg/kg/d	0.223
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 (including solvent based products)	Consumer - combined, 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 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/m³

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/m³	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 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^3

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^3	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 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/m³

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/m³	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
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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	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 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 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/m³

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/m³	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/m³	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^3

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.