



## SAFETY DATA SHEET

### TETRANYL L1 901

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

##### 1.1. Product identifier

Product name TETRANYL L1 901

Product number 47377

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

Identified uses Chemical Intermediate Cleaning agent. Cosmetics perfumery Laboratory reagent.  
Manufacture of substance Leather treatment Textiles Industrial use. Consumer use.  
Professional use.

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

Supplier Univar Solutions UK Ltd  
Aquarius House  
6 Mid Point Business Park  
Bradford  
BD3 7AY  
+44 1274 267300  
+44 1274 267306  
SDS.EMEA@univarsolutions.com

##### 1.4. Emergency telephone number

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

Sds No. 47377

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### Classification (EC 1272/2008)

Physical hazards Flam. Liq. 3 - H226

Health hazards Not Classified

Environmental hazards Aquatic Chronic 3 - H412

##### 2.2. Label elements

###### Hazard pictograms



Signal word Warning

Hazard statements H226 Flammable liquid and vapour.  
H412 Harmful to aquatic life with long lasting effects.

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|                                 |                                                                                                     |
|---------------------------------|-----------------------------------------------------------------------------------------------------|
| <b>Precautionary statements</b> | P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. |
|                                 | P273 Avoid release to the environment.                                                              |
|                                 | P501 Dispose of contents/ container in accordance with local regulations.                           |

### 2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB. The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

|                                                                                                        |                      |                                                  |       |
|--------------------------------------------------------------------------------------------------------|----------------------|--------------------------------------------------|-------|
| FATTY ACIDS, C16-18 AND C18-UNSATD., REACTION PRODUCTS WITH TRIETHANOLAMINE, DI-ME SULFATE-QUATERNIZED |                      |                                                  | ≥90 % |
| CAS number: 1335202-88-4                                                                               | EC number: 931-203-0 | REACH registration number: 01-2119463889-16-XXXX |       |
| Acute Toxicity Estimate (oral):> 5000 mg/kg                                                            |                      |                                                  |       |
| Acute Toxicity Estimate (dermal):> 2000 mg/kg                                                          |                      |                                                  |       |
| Classification                                                                                         |                      |                                                  |       |
| Aquatic Chronic 3 - H412                                                                               |                      |                                                  |       |

|                                                               |                      |                                                  |             |
|---------------------------------------------------------------|----------------------|--------------------------------------------------|-------------|
| PROPAN-2-OL                                                   |                      |                                                  | ≥10 - <20 % |
| CAS number: 67-63-0                                           | EC number: 200-661-7 | REACH registration number: 01-2119457558-25-XXXX |             |
| Acute Toxicity Estimate (oral):5840 mg/kg                     |                      |                                                  |             |
| Acute Toxicity Estimate (dermal):12800 mg/kg                  |                      |                                                  |             |
| Acute Toxicity Estimate (inhalation):> 10000 ppmVapour6 hours |                      |                                                  |             |
| Classification                                                |                      |                                                  |             |
| Flam. Liq. 2 - H225                                           |                      |                                                  |             |
| Eye Irrit. 2 - H319                                           |                      |                                                  |             |
| STOT SE 3 - H336                                              |                      |                                                  |             |

The full text for all hazard statements is displayed in Section 16.

**Composition comments** The data shown are in accordance with the latest EC Directives.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

|                     |                                                                                                                                                                                                                                                                                                                                                           |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Rinse nose and mouth with water. Get medical attention if any discomfort continues. When heated, vapours/gases hazardous to health may be formed. Development of symptoms may be delayed for 24 to 48 hours. Keep affected person under observation. |
| <b>Ingestion</b>    | Rinse mouth thoroughly with water. Give plenty of water to drink. Do not induce vomiting unless under the direction of medical personnel. Get medical attention if any discomfort continues.                                                                                                                                                              |
| <b>Skin contact</b> | After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of water. Get medical attention if any discomfort continues.                                                                                                                                                                                    |

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**Eye contact** Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 10 minutes. Get medical attention if any discomfort continues.

**Protection of first aiders** No action shall be taken without appropriate training or involving any personal risk.

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

**Eye contact** May cause temporary eye irritation.

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

**Notes for the doctor** Treat symptomatically. When heated, vapours/gases hazardous to health may be formed. Development of symptoms may be delayed for 24 to 48 hours. Keep affected person under observation.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

**Suitable extinguishing media** Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.

**Unsuitable extinguishing media** Do not use water jet as an extinguisher, as this will spread the fire.

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

**Specific hazards** When heated and in case of fire, toxic vapours/gases may be formed. Flammable liquid and vapour. Fire-water run-off in sewers may create fire or explosion hazard. Containers can burst violently or explode when heated, due to excessive pressure build-up. Harmful to aquatic life with long lasting effects. Avoid the spillage or runoff entering drains, sewers or watercourses.

**Hazardous combustion products** Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of the following substances: Carbon. Nitrogen. Sulphur.

### 5.3. Advice for firefighters

**Protective actions during firefighting** Evacuate area. No action shall be taken without appropriate training or involving any personal risk. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Control run-off water by containing and keeping it out of sewers and watercourses. Contain and collect extinguishing water.

**Special protective equipment for firefighters** Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

## SECTION 6: Accidental release measures

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

**Personal precautions** Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. No action shall be taken without appropriate training or involving any personal risk. Evacuate area. Keep unnecessary and unprotected personnel away from the spillage. Do not touch or walk into spilled material. Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. If ventilation is inadequate, suitable respiratory protection must be worn.

### 6.2. Environmental precautions

**Environmental precautions** Harmful to aquatic life with long lasting effects. Do not discharge into drains or watercourses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.

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

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**Methods for cleaning up** Stop leak if safe to do so. Move containers from spillage area. Use non sparking handtools and explosion-proof electric equipment. Approach the spillage from upwind. Avoid the spillage or runoff entering drains, sewers or watercourses. Absorb spillage with non-combustible, absorbent material. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible.

### 6.4. Reference to other sections

**Reference to other sections** Wear protective clothing as described in Section 8 of this safety data sheet. Collect and dispose of spillage as indicated in Section 13.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

**Usage precautions** Provide adequate ventilation. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Avoid inhalation of vapours and contact with skin and eyes. Avoid release to the environment. If ventilation is inadequate, suitable respiratory protection must be worn. Do not enter storage areas or confined spaces unless adequately ventilated. Store in tightly-closed, original container. Container must be kept tightly closed when not in use. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharges. Product residues retained in emptied containers can be hazardous. Do not reuse empty containers.

**Advice on general occupational hygiene** Do not eat, drink or smoke when using this product. Remove contaminated clothing and protective equipment before entering eating areas. Wash at the end of each work shift and before eating, smoking and using the toilet. Observe good chemical hygiene practices.

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

**Storage precautions** Store in tightly-closed, original container in a dry, cool and well-ventilated place. Avoid exposure to high temperatures or direct sunlight. Store away from incompatible materials (see Section 10). Keep away from food and drink. Eliminate all sources of ignition. Store away from the following materials: Strong oxidising agents. Container must be kept tightly closed when not in use. Keep containers upright. Only store in correctly labelled containers. Use appropriate containment to avoid environmental contamination.

### 7.3. Specific end use(s)

**Specific end use(s)** The identified uses for this product are detailed in Section 1.2.

## SECTION 8: Exposure controls/Personal protection

### 8.1. Control parameters

#### Occupational exposure limits

#### **PROPAN-2-OL**

Long-term exposure limit (8-hour TWA): WEL 400 ppm 999 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 500 ppm 1250 mg/m<sup>3</sup>

WEL = Workplace Exposure Limit.

**Ingredient comments** Observe any occupational exposure limits for the product or ingredients.

**FATTY ACIDS, C16-18 AND C18-UNSATD., REACTION PRODUCTS WITH TRIETHANOLAMINE, DI-ME SULFATE-QUATERNIZED (CAS: 1335202-88-4)**

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### DNEL

Workers - Inhalation; Long term systemic effects: 14.8 mg/m<sup>3</sup>  
 Workers - Dermal; Long term systemic effects: 105 mg/kg/day  
 General population - Inhalation; Long term systemic effects: 2.61 mg/m<sup>3</sup>  
 General population - Dermal; Long term systemic effects: 37.5 mg/kg/day  
 General population - Oral; Long term systemic effects: 1.5 mg/kg/day

### PNEC

Fresh water; 0.022 mg/l  
 marine water; 0.002 mg/l  
 STP; 2.96 mg/l  
 Sediment (Freshwater); 22.48 mg/kg  
 Sediment (Marinewater); 2.248 mg/kg  
 Soil; 4.483 mg/kg

### PROPAN-2-OL (CAS: 67-63-0)

### DNEL

Industry - Dermal; Long term systemic effects: 888 mg/kg/day  
 Industry - Inhalation; Long term systemic effects: 500 mg/m<sup>3</sup>  
 Consumer - Dermal; Long term systemic effects: 319 mg/kg/day  
 Consumer - Inhalation; Long term systemic effects: 89 mg/m<sup>3</sup>  
 Consumer - Oral; Long term systemic effects: 26 mg/kg/day

### PNEC

- Fresh water; 140.9 mg/l  
 - marine water; 140.9 mg/l  
 - Intermittent release; 140.9 mg/l  
 - STP; 2251 mg/l  
 - Sediment (Freshwater); 552 mg/kg  
 - Sediment (Marinewater); 552 mg/kg  
 - Soil; 28 mg/kg

## 8.2. Exposure controls

### Protective equipment



### Appropriate engineering controls

Provide adequate ventilation. As this product contains ingredients with exposure limits, process enclosures, local exhaust ventilation or other engineering controls should be used to keep worker exposure below any statutory or recommended limits, if use generates dust, fumes, gas, vapour or mist.

### Eye/face protection

Eyewear complying with an approved standard should be worn if a risk assessment indicates eye contact is possible. The following protection should be worn: Chemical splash goggles. Tight-fitting safety glasses. Personal protective equipment for eye and face protection should comply with European Standard EN166.

### Hand protection

The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. The selected gloves should have a breakthrough time of at least 8 hours. Butyl rubber. Viton rubber (fluoro rubber). Nitrile rubber. Neoprene. To protect hands from chemicals, gloves should comply with European Standard EN374.

### Other skin and body protection

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact. Wear fire/flammable resistant/retardant clothing. For the greatest protection, clothing should include anti-static overalls, boots and gloves.

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|                                        |                                                                                                                                                                                                                                                                                                                                                          |
|----------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Hygiene measures</b>                | When using do not eat, drink or smoke. Wash at the end of each work shift and before eating, smoking and using the toilet. Remove contaminated clothing and protective equipment before entering eating areas. Eye wash facilities and emergency shower must be available when handling this product.                                                    |
| <b>Respiratory protection</b>          | Respiratory protection complying with an approved standard should be worn if a risk assessment indicates inhalation of contaminants is possible. Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. If ventilation is inadequate, suitable respiratory protection must be worn. EN 136/140/141/145/143/149 |
| <b>Environmental exposure controls</b> | Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.                                     |

### SECTION 9: Physical and chemical properties

#### *9.1. Information on basic physical and chemical properties*

|                                                     |                                     |
|-----------------------------------------------------|-------------------------------------|
| <b>Appearance</b>                                   | Liquid. Paste.                      |
| <b>Colour</b>                                       | Yellowish.                          |
| <b>Odour</b>                                        | Characteristic.                     |
| <b>Odour threshold</b>                              | No information available.           |
| <b>pH</b>                                           | pH (diluted solution): 2 - 3.5 (5%) |
| <b>Melting point</b>                                | No information available.           |
| <b>Pour Point</b>                                   | No information available.           |
| <b>Freezing Point</b>                               | No information available.           |
| <b>Initial boiling point and range</b>              | No information available.           |
| <b>Flash point</b>                                  | 39°C Closed cup.                    |
| <b>Evaporation rate</b>                             | No information available.           |
| <b>Evaporation factor</b>                           | No information available.           |
| <b>Flammability (solid, gas)</b>                    | No information available.           |
| <b>Upper/lower flammability or explosive limits</b> | No information available.           |
| <b>Other flammability</b>                           | No information available.           |
| <b>Vapour pressure</b>                              | No information available.           |
| <b>Vapour density</b>                               | No information available.           |
| <b>Relative density</b>                             | 0.965 - 0.975 @ 20°C                |
| <b>Bulk density</b>                                 | No information available.           |
| <b>Solubility(ies)</b>                              | No information available.           |
| <b>Partition coefficient</b>                        | Not applicable.                     |
| <b>Auto-ignition temperature</b>                    | No information available.           |
| <b>Decomposition Temperature</b>                    | No information available.           |
| <b>Viscosity</b>                                    | 100 - 300 cSt @ 20°C                |

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**Explosive properties** No information available.

**Explosive under the influence of a flame** No information available.

**Oxidising properties** Not available.

### 9.2. Other information

**Other information** No information available.

**Refractive index** No information available.

**Particle size** Not applicable.

**Molecular weight** No information available.

**Volatility** No information available.

**Saturation concentration** No information available.

**Critical temperature** No information available.

**Volatile organic compound** No information available.

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

**Reactivity** No test data specifically related to reactivity available for this product or its ingredients.

### 10.2. Chemical stability

**Stability** Stable at normal ambient temperatures and when used as recommended.

### 10.3. Possibility of hazardous reactions

**Possibility of hazardous reactions** Under normal conditions of storage and use, no hazardous reactions will occur.

### 10.4. Conditions to avoid

**Conditions to avoid** Avoid heat, flames and other sources of ignition. Take precautionary measures against static discharge.

### 10.5. Incompatible materials

**Materials to avoid** Strong oxidising agents.

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours. Oxides of the following substances: Carbon. Nitrogen. Sulphur.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity - oral

**Notes (oral LD<sub>50</sub>)** No information available.

#### Acute toxicity - dermal

**Notes (dermal LD<sub>50</sub>)** No information available.

#### Acute toxicity - inhalation

**Notes (inhalation LC<sub>50</sub>)** No information available.

#### Skin corrosion/irritation

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**Skin corrosion/irritation** Not irritating.

**Serious eye damage/irritation**

**Serious eye damage/irritation** Not irritating.

**Respiratory sensitisation**

**Respiratory sensitisation** No information available.

**Skin sensitisation**

**Skin sensitisation** No information available.

**Germ cell mutagenicity**

**Genotoxicity - in vitro** No information available.

**Carcinogenicity**

**Carcinogenicity** No information available.

**Reproductive toxicity**

**Reproductive toxicity - fertility** No information available.

**Specific target organ toxicity - single exposure**

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

**Specific target organ toxicity - repeated exposure**

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

**Aspiration hazard**

**Aspiration hazard** No information available.

**Toxicokinetics**

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**Inhalation**

Gas or vapour in high concentrations may irritate the respiratory system.

**Ingestion**

May cause discomfort if swallowed.

**Skin contact**

Skin irritation should not occur when used as recommended.

**Eye contact**

May cause temporary eye irritation.

**Toxicological information on ingredients.**

**FATTY ACIDS, C16-18 AND C18-UNSATD., REACTION PRODUCTS WITH TRIETHANOLAMINE, DI-ME SULFATE-QUATERNIZED**

**Acute toxicity - oral**

**Notes (oral LD<sub>50</sub>)** LD<sub>50</sub> > 4480 mg/kg, Oral, Rat

**Acute toxicity - dermal**

**Notes (dermal LD<sub>50</sub>)** LD<sub>50</sub> > 2000 mg/kg, Dermal, Rat

**Acute toxicity - inhalation**

**Notes (inhalation LC<sub>50</sub>)** No information available.

**Skin corrosion/irritation**

**Skin corrosion/irritation** Not irritating.

**Serious eye damage/irritation**

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**Serious eye damage/irritation** Not irritating.

**Respiratory sensitisation**

**Respiratory sensitisation** No information available.

**Skin sensitisation**

**Skin sensitisation** No information available. Not sensitising. Guinea pig

**Germ cell mutagenicity**

**Genotoxicity - in vitro** Bacterial reverse mutation test: Negative. OECD 471 Chromosome aberration: Negative. OECD 473 Gene mutation: Negative. OECD 476

**Genotoxicity - in vivo** Micronucleus assay: Negative. OECD 474

**Carcinogenicity**

**Carcinogenicity** No information available.

**Reproductive toxicity**

**Reproductive toxicity - fertility** - NOAEL 1000 mg/kg, Oral, Rat Fertility - NOEL 1000 mg/kg, Oral, Rat

**Specific target organ toxicity - single exposure**

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

**Specific target organ toxicity - repeated exposure**

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

**Aspiration hazard**

**Aspiration hazard** No information available.

**Toxicokinetics** The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**Inhalation** Gas or vapour in high concentrations may irritate the respiratory system.

**Ingestion** May cause discomfort if swallowed.

**Skin contact** Skin irritation should not occur when used as recommended.

**Eye contact** May cause temporary eye irritation.

**PROPAN-2-OL****Acute toxicity - oral**

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 5,840.0

**Species** Rat

**Notes (oral LD<sub>50</sub>)** LD<sub>50</sub> 5840 mg/kg, Oral, Rat OECD 401

**ATE oral (mg/kg)** 5,840.0

**Acute toxicity - dermal**

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**Acute toxicity dermal (LD<sub>50</sub>)** 12,800.0 mg/kg)

**Species** Rabbit

**Notes (dermal LD<sub>50</sub>)** LD<sub>50</sub> > 12800 mg/kg, Dermal, Rabbit OECD 402

**ATE dermal (mg/kg)** 12,800.0

**Acute toxicity - inhalation**

**Acute toxicity inhalation (LC<sub>50</sub> gases ppmV)** 10,000.0

**Species** Rat

**Notes (inhalation LC<sub>50</sub>)** LC<sub>50</sub> > 10000 ppm, 6 hours, Vapour Rat OECD 403

**Skin corrosion/irritation**

**Animal data** Not irritating.

**Serious eye damage/irritation**

**Serious eye damage/irritation** Causes serious eye irritation.

**Respiratory sensitisation**

**Respiratory sensitisation** No information available.

**Skin sensitisation**

**Skin sensitisation** No information available.

**Germ cell mutagenicity**

**Genotoxicity - in vitro** Negative.

**Carcinogenicity**

**Carcinogenicity** There is no evidence that the product can cause cancer.

**Reproductive toxicity**

**Reproductive toxicity - fertility** No evidence of reproductive toxicity in animal studies.

**Specific target organ toxicity - single exposure**

**STOT - single exposure** May cause drowsiness or dizziness.

**Specific target organ toxicity - repeated exposure**

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

**Aspiration hazard**

**Aspiration hazard** Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.

**Toxicokinetics**

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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|                      |                                                                                                                        |
|----------------------|------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>    | Gas or vapour in high concentrations may irritate the respiratory system. May cause drowsiness or dizziness.           |
| <b>Ingestion</b>     | Droplets of the product aspirated into the lungs through ingestion or vomiting may cause a serious chemical pneumonia. |
| <b>Skin contact</b>  | Skin irritation should not occur when used as recommended.                                                             |
| <b>Eye contact</b>   | Causes serious eye irritation.                                                                                         |
| <b>Target organs</b> | Kidneys Liver                                                                                                          |

### SECTION 12: Ecological information

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

#### Ecological information on ingredients.

#### FATTY ACIDS, C16-18 AND C18-UNSATD., REACTION PRODUCTS WITH TRIETHANOLAMINE, DI-ME SULFATE-QUATERNIZED

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

#### PROPAN-2-OL

**Ecotoxicity** The product is not expected to be hazardous to the environment. However, large or frequent spills may have hazardous effects on the environment.

#### 12.1. Toxicity

**Toxicity** Harmful to aquatic life with long lasting effects.

#### Ecological information on ingredients.

#### FATTY ACIDS, C16-18 AND C18-UNSATD., REACTION PRODUCTS WITH TRIETHANOLAMINE, DI-ME SULFATE-QUATERNIZED

**Toxicity** Harmful to aquatic life with long lasting effects.

#### Acute aquatic toxicity

**Acute toxicity - fish** LC<sub>50</sub>, 96 hours: 1.91 mg/l, Fish, Freshwater fish  
OECD 203

**Acute toxicity - aquatic invertebrates** EC<sub>50</sub>, 48 hours: 2.23 mg/l, Daphnia magna, Freshwater invertebrates

**Acute toxicity - aquatic plants** EC<sub>50</sub>, 72 hours: 2.14 mg/l, Algae  
OECD 201

#### Chronic aquatic toxicity

**Chronic toxicity - fish early life stage** NOEC, 30 days: 0.224 mg/l, Fish  
OECD 210

**Chronic toxicity - aquatic invertebrates** EC10, 21 days: 0.236 mg/l,  
OECD 211

#### PROPAN-2-OL

**Toxicity** Not considered toxic to fish.

#### Acute aquatic toxicity

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|                                        |                                                                               |
|----------------------------------------|-------------------------------------------------------------------------------|
| Acute toxicity - fish                  | LC <sub>50</sub> , 48 hours: 9640 mg/l, Pimephales promelas (Fat-head Minnow) |
| Acute toxicity - aquatic invertebrates | EC <sub>50</sub> , 48 hours: 10000 mg/l, Daphnia magna                        |
| Acute toxicity - aquatic plants        | EC <sub>50</sub> , 7 days: 1800 mg/l, Algae                                   |

### 12.2. Persistence and degradability

**Persistence and degradability** The product is readily biodegradable. The surfactant(s) contained in this product complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them at their direct request, or at the request of a detergent manufacturer.

**Biodegradation** - Degradation > 70%: 56 days

### Ecological information on ingredients.

#### FATTY ACIDS, C16-18 AND C18-UNSATD., REACTION PRODUCTS WITH TRIETHANOLAMINE, DI-ME SULFATE-QUATERNIZED

**Persistence and degradability** The product is readily biodegradable.

**Biodegradation** - Degradation > 60 %: 28 days  
OECD 301B

#### PROPAN-2-OL

**Persistence and degradability** The substance is readily biodegradable.

**Biological oxygen demand** 53 %

### 12.3. Bioaccumulative potential

**Bioaccumulative potential** No data available on bioaccumulation.

**Partition coefficient** Not applicable.

### Ecological information on ingredients.

#### FATTY ACIDS, C16-18 AND C18-UNSATD., REACTION PRODUCTS WITH TRIETHANOLAMINE, DI-ME SULFATE-QUATERNIZED

**Bioaccumulative potential** No data available on bioaccumulation.

#### PROPAN-2-OL

**Bioaccumulative potential** The product is not bioaccumulating.

**Partition coefficient** log Pow: 0.05 OECD 107

### 12.4. Mobility in soil

**Mobility** No information available.

### Ecological information on ingredients.

#### FATTY ACIDS, C16-18 AND C18-UNSATD., REACTION PRODUCTS WITH TRIETHANOLAMINE, DI-ME SULFATE-QUATERNIZED

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**Mobility** No information available.

**PROPAN-2-OL**

**Mobility** The product is soluble in water.

**Surface tension** 22.7 mN/m @ 20°C

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

**Results of PBT and vPvB assessment** This product does not contain any substances classified as PBT or vPvB.

**Ecological information on ingredients.****FATTY ACIDS, C16-18 AND C18-UNSATD., REACTION PRODUCTS WITH TRIETHANOLAMINE, DI-ME SULFATE-QUATERNIZED**

**Results of PBT and vPvB assessment** This substance is not classified as PBT or vPvB according to current EU criteria.

**PROPAN-2-OL**

**Results of PBT and vPvB assessment** This substance is not classified as PBT or vPvB according to current EU criteria.

**12.6. Other adverse effects**

**Other adverse effects** The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**Ecological information on ingredients.****FATTY ACIDS, C16-18 AND C18-UNSATD., REACTION PRODUCTS WITH TRIETHANOLAMINE, DI-ME SULFATE-QUATERNIZED**

**Other adverse effects** The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

**PROPAN-2-OL**

**Other adverse effects** The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

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

**General information** Waste is classified as hazardous waste. Do not puncture or incinerate, even when empty.

**Disposal methods** Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

**SECTION 14: Transport information**

**General** Wear protective clothing as described in Section 8 of this safety data sheet.

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### 14.1. UN number

|                  |      |
|------------------|------|
| UN No. (ADR/RID) | 1993 |
| UN No. (IMDG)    | 1993 |
| UN No. (ICAO)    | 1993 |
| UN No. (ADN)     | 1993 |

### 14.2. UN proper shipping name

|                                |                                                 |
|--------------------------------|-------------------------------------------------|
| Proper shipping name (ADR/RID) | FLAMMABLE LIQUID, N.O.S. (CONTAINS PROPAN-2-OL) |
| Proper shipping name (IMDG)    | FLAMMABLE LIQUID, N.O.S. (CONTAINS PROPAN-2-OL) |
| Proper shipping name (ICAO)    | FLAMMABLE LIQUID, N.O.S. (CONTAINS PROPAN-2-OL) |
| Proper shipping name (ADN)     | FLAMMABLE LIQUID, N.O.S. (CONTAINS PROPAN-2-OL) |

### 14.3. Transport hazard class(es)

|                             |    |
|-----------------------------|----|
| ADR/RID class               | 3  |
| ADR/RID classification code | F1 |
| ADR/RID label               | 3  |
| IMDG class                  | 3  |
| ICAO class/division         | 3  |
| ADN class                   | 3  |

#### Transport labels



### 14.4. Packing group

|                       |     |
|-----------------------|-----|
| ADR/RID packing group | III |
| IMDG packing group    | III |
| ICAO packing group    | III |
| ADN packing group     | III |

### 14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant  
No.

### 14.6. Special precautions for user

|                                        |          |
|----------------------------------------|----------|
| EmS                                    | F-E, S-E |
| ADR transport category                 | 3        |
| Emergency Action Code                  | •2YE     |
| Hazard Identification Number (ADR/RID) | 30       |
| Tunnel restriction code                | (D/E)    |

### 14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

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Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code Not applicable.

### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

|                                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>EU legislation</b>                                       | <p>Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended).</p> <p>Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).</p> <p>COMMISSION REGULATION (EU) 2020/878 of 18 June 2020</p> <p>This product may impact SEVESO storage regulations.</p> |
| <b>Health and environmental listings</b>                    | <p>This surfactant complies with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them at their direct request, or at the request of a detergent manufacturer.</p>                                                                                                                                                                             |
| <b>Restrictions (Annex XVII Regulation 1907/2006)</b>       | <p>CAUTION - Chemical may be subject to REACH RESTRICTIONS - see Annex XVII. This product is/contains a substance that is included in REGULATION (EC) No 1907/2006 (REACH) ANNEX XVII - RESTRICTIONS ON THE MANUFACTURE, PLACING ON THE MARKET AND USE OF CERTAIN DANGEROUS SUBSTANCES, MIXTURES AND ARTICLES. Entry number: 3, 40</p>                                                                                                                                                                                          |
| <b>Seveso Directive - Control of major accident hazards</b> | <p>P5c</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

#### 15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

#### Inventories

##### **EU - EINECS/ELINCS**

All the ingredients are listed or exempt.

##### **Canada - DSL/NDSL**

All the ingredients are listed or exempt.  
DSL

##### **US - TSCA**

All the ingredients are listed or exempt.

##### **Australia - AICS**

All the ingredients are listed or exempt.

##### **Japan - ENCS**

All the ingredients are listed or exempt.

##### **Korea - KECI**

All the ingredients are listed or exempt.

##### **China - IECSC**

All the ingredients are listed or exempt.

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### Philippines – PICCS

All the ingredients are listed or exempt.

### New Zealand - NZIOC

All the ingredients are listed or exempt.

### Taiwan - TCSI

All the ingredients are listed or exempt.

## SECTION 16: Other information

### Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate.  
 ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.  
 ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.  
 CAS: Chemical Abstracts Service.  
 DNEL: Derived No Effect Level.  
 IATA: International Air Transport Association.  
 IMDG: International Maritime Dangerous Goods.  
 Kow: Octanol-water partition coefficient.  
 LC<sub>50</sub>: Lethal Concentration to 50 % of a test population.  
 LD<sub>50</sub>: Lethal Dose to 50% of a test population (Median Lethal Dose).  
 PBT: Persistent, Bioaccumulative and Toxic substance.  
 PNEC: Predicted No Effect Concentration.  
 REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006.  
 RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.  
 vPvB: Very Persistent and Very Bioaccumulative.  
 IARC: International Agency for Research on Cancer.  
 MARPOL 73/78: International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978.  
 cATpE: Converted Acute Toxicity Point Estimate.  
 BCF: Bioconcentration Factor.  
 BOD: Biochemical Oxygen Demand.  
 EC<sub>50</sub>: 50% of maximal Effective Concentration.  
 LOAEC: Lowest Observed Adverse Effect Concentration.  
 LOAEL: Lowest Observed Adverse Effect Level.  
 NOAEC: No Observed Adverse Effect Concentration.  
 NOAEL: No Observed Adverse Effect Level.  
 NOEC: No Observed Effect Concentration.  
 LOEC: Lowest Observed Effect Concentration.  
 DMEL: Derived Minimal Effect Level.  
 EL50: Exposure Limit 50  
 hPa: Hectopascal  
 LL50: Lethal Loading fifty  
 OECD: Organisation for Economic Co-operation and Development  
 POW: Octanol-water partition coefficient  
 SCBA: self-contained breathing apparatus  
 STP: Sewage Treatment Plant  
 VOC: Volatile Organic Compounds

### Classification abbreviations and acronyms

Acute Tox. = Acute toxicity  
 Aquatic Acute = Hazardous to the aquatic environment (acute)  
 Aquatic Chronic = Hazardous to the aquatic environment (chronic)

**TETRANYL L1 901**

|                                                                         |                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Key literature references and sources for data</b>                   | Supplier's information.                                                                                                                                                                                                    |
| <b>Classification procedures according to Regulation (EC) 1272/2008</b> | Flam. Liq. 3 - H226: On basis of test data. Aquatic Chronic 3 - H412: Calculation method.                                                                                                                                  |
| <b>Revision comments</b>                                                | NOTE: Lines within the margin indicate significant changes from the previous revision.                                                                                                                                     |
| <b>Revision date</b>                                                    | 02/06/2023                                                                                                                                                                                                                 |
| <b>Version number</b>                                                   | 6.000                                                                                                                                                                                                                      |
| <b>Supersedes date</b>                                                  | 01/12/2022                                                                                                                                                                                                                 |
| <b>SDS number</b>                                                       | 47377                                                                                                                                                                                                                      |
| <b>SDS status</b>                                                       | Approved.                                                                                                                                                                                                                  |
| <b>Hazard statements in full</b>                                        | H225 Highly flammable liquid and vapour.<br>H226 Flammable liquid and vapour.<br>H319 Causes serious eye irritation.<br>H336 May cause drowsiness or dizziness.<br>H412 Harmful to aquatic life with long lasting effects. |
| <b>Signature</b>                                                        | Lisa Bland                                                                                                                                                                                                                 |

This 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. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.



## Exposure scenario

### Use as a fuel - Industrial

#### Identification

|                           |                                                                                                                                                                     |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product name              | Isopropanol                                                                                                                                                         |
| REACH registration number | 01-2119457558-25-XXXX                                                                                                                                               |
| CAS number                | 67-63-0                                                                                                                                                             |
| EC number                 | 200-661-7                                                                                                                                                           |
| EU index number           | 603-117-00-0                                                                                                                                                        |
| Supplier                  | Univar Solutions UK Ltd<br>Aquarius House<br>6 Mid Point Business Park<br>Bradford<br>BD3 7AY<br>+44 1274 267300<br>+44 1274 267306<br>SDS.EMEA@univarsolutions.com |

#### 1. Title of exposure scenario

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Main title                     | Use as a fuel - Industrial                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Process scope                  | Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Main sector                    | SU3 Industrial uses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <u>Environment</u>             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Environmental release category | ERC7 Use of functional fluid at industrial site                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <u>Worker</u>                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Process category               | PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions<br>PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions<br>PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition<br>PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities<br>PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities<br>PROC16 Use of fuels |

#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

##### Product characteristics

Not regarded as dangerous for the environment. No exposure scenario required.

## Use as a fuel - Industrial

### 2. Conditions of use affecting exposure (Workers - Health 1)

#### Product characteristics

**Physical state** Liquid, vapour pressure 0.5 - 10 kPa at STP

**Concentration details** Covers concentrations up to 100 %.

#### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

#### Other given operational conditions affecting workers exposure

**Temperature** Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Assumes a good basic standard of occupational hygiene is implemented.

#### Technical conditions and measures at process level (source) to prevent release

**Technical protective measures** Avoid direct eye contact with product, also via contamination on hands. Drain down system prior to equipment break-in or maintenance. Retain drain-downs in sealed storage pending disposal or for subsequent recycle. Store substance within a closed system.

#### Organisational measures to prevent/limit releases, dispersion and exposure

**Organisational measures** Bulk transfers Transfer via enclosed lines. Drum/batch transfers Use drum pumps or carefully pour from container.

#### Risk management measures

Use suitable eye protection.

### 3. Exposure estimation (Environment 1)

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

### 3. Exposure estimation (Health 1)

**Assessment method** Used ECETOC TRA model.

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

### 4. Guidance to check compliance with the exposure scenario (Health 1)

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



## Exposure scenario

### Use as a fuel - Professional

#### Identification

|                           |                                                                                                                                                                     |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product name              | Isopropanol                                                                                                                                                         |
| REACH registration number | 01-2119457558-25-XXXX                                                                                                                                               |
| CAS number                | 67-63-0                                                                                                                                                             |
| EC number                 | 200-661-7                                                                                                                                                           |
| EU index number           | 603-117-00-0                                                                                                                                                        |
| Supplier                  | Univar Solutions UK Ltd<br>Aquarius House<br>6 Mid Point Business Park<br>Bradford<br>BD3 7AY<br>+44 1274 267300<br>+44 1274 267306<br>SDS.EMEA@univarsolutions.com |

#### 1. Title of exposure scenario

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Main title                     | Use as a fuel - Professional                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Process scope                  | Covers the use as a fuel (or fuel additive) and includes activities associated with its transfer, use, equipment maintenance and handling of waste.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Main sector                    | SU22 Professional uses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <u>Environment</u>             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Environmental release category | ERC9a Widespread use of functional fluid (indoor)<br>ERC9b Widespread use of functional fluid (outdoor)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| <u>Worker</u>                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Process category               | PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions<br>PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions<br>PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition<br>PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities<br>PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities<br>PROC16 Use of fuels |

#### 2. Conditions of use affecting exposure (Workers - Health 1)

##### Product characteristics

|                |                                             |
|----------------|---------------------------------------------|
| Physical state | Liquid, vapour pressure 0.5 - 10 kPa at STP |
|----------------|---------------------------------------------|

## Use as a fuel - Professional

**Concentration details** Covers concentrations up to 100 %.

### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

### Other given operational conditions affecting workers exposure

**Temperature** Assumes use at not more than 20°C above ambient temperature, unless stated differently.

Assumes a good basic standard of occupational hygiene is implemented.

### Technical conditions and measures at process level (source) to prevent release

**Technical protective measures** Avoid direct eye contact with product, also via contamination on hands. Store substance within a closed system. Bulk transfers Transfer via enclosed lines. Drum/batch transfers Use drum pumps or carefully pour from container.

### Organisational measures to prevent/limit releases, dispersion and exposure

**Organisational measures** Drain down system prior to equipment break-in or maintenance. Retain drain-downs in sealed storage pending disposal or for subsequent recycle. Bulk transfers Clear transfer lines prior to de-coupling. Drum/batch transfers Avoid spillage when withdrawing pump.

### Risk management measures

Use suitable eye protection.

## 2. Conditions of use affecting exposure (Non-industrial - Environment 1)

### Product characteristics

Not regarded as dangerous for the environment. No exposure scenario required.

## 3. Exposure estimation (Environment 1)

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

## 3. Exposure estimation (Health 1)

**Assessment method** Used ECETOC TRA model.

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

## 4. Guidance to check compliance with the exposure scenario (Health 1)

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



## Exposure scenario

### Use as a fuel - Consumer

#### Identification

|                           |                                                                                                                                                                     |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product name              | Isopropanol                                                                                                                                                         |
| REACH registration number | 01-2119457558-25-XXXX                                                                                                                                               |
| CAS number                | 67-63-0                                                                                                                                                             |
| EC number                 | 200-661-7                                                                                                                                                           |
| EU index number           | 603-117-00-0                                                                                                                                                        |
| Supplier                  | Univar Solutions UK Ltd<br>Aquarius House<br>6 Mid Point Business Park<br>Bradford<br>BD3 7AY<br>+44 1274 267300<br>+44 1274 267306<br>SDS.EMEA@univarsolutions.com |

#### 1. Title of exposure scenario

|                  |                                       |
|------------------|---------------------------------------|
| Main title       | Use as a fuel - Consumer              |
| Process scope    | Covers consumer uses in liquid fuels. |
| Product category | PC13 Fuels.                           |
| Main sector      | SU21 Consumer uses                    |

##### Environment

|                                |                                                                                                         |
|--------------------------------|---------------------------------------------------------------------------------------------------------|
| Environmental release category | ERC9a Widespread use of functional fluid (indoor)<br>ERC9b Widespread use of functional fluid (outdoor) |
|--------------------------------|---------------------------------------------------------------------------------------------------------|

#### 2. Conditions of use affecting exposure (Non-industrial - Environment 1)

##### Product characteristics

Not regarded as dangerous for the environment. No exposure scenario required.

#### 2. Conditions of use affecting exposure (Non-industrial - Health 1)

##### Product characteristics

|                       |                                                             |
|-----------------------|-------------------------------------------------------------|
| Physical state        | Liquid, vapour pressure > 10 Pa (STP)                       |
| Concentration details | Covers concentrations up to 100 %. Unless otherwise stated. |

##### Amounts used

For each use event, covers use amounts up to 37,500 g.

## Use as a fuel - Consumer

PC13\_2 Liquid: scooter refuelling For each use event, covers use amounts up to 3,750 g.  
 PC13\_3 Liquid: garden equipment - use PC13\_4 Liquid: Garden equipment - Refuelling  
 PC13\_6 Liquid: home space heater fuel For each use event, covers use amounts up to 750 g.  
 PC13\_5 Liquid: lamp oil For each use event, covers use amounts up to 100 g.

### Frequency and duration of use

Covers use up to 1 time per week.  
 Covers use up to 1 time per day.  
 Application duration: 2 hours  
 Unless otherwise stated.

PC13\_3 Liquid: garden equipment - use PC13\_4 Liquid: Garden equipment - Refuelling  
 PC13\_6 Liquid: home space heater fuel Covers use up to 26 days/year. PC13\_1 Liquid: automotive refuelling Covers exposure up to 0.05 hours per event. PC13\_2 Liquid: scooter refuelling PC13\_4 Liquid: Garden equipment - Refuelling Covers exposure up to 0.03 hours per event. PC13\_3 Liquid: garden equipment - use Covers exposure up to 2 hours per event. PC13\_5 Liquid: lamp oil Covers exposure up to 0.01 hours per event. PC13\_6 Liquid: home space heater fuel Covers exposure up to 8 hours per event.

### Human factors not influenced by risk management

**Potentially exposed body parts** Covers skin contact area up to 420 cm<sup>2</sup>. Unless otherwise stated.

PC13\_1 Liquid: automotive refuelling PC13\_2 Liquid: scooter refuelling PC13\_5 Liquid: lamp oil Covers skin contact area up to 210 cm<sup>2</sup>.

### Other given operational conditions affecting Non-industrial exposure

**Temperature** Assumes activities are at ambient temperature (unless stated differently).

**Room size** Covers use in room size of 20 m<sup>3</sup>. Unless otherwise stated. PC13\_1 Liquid: automotive refuelling PC13\_2 Liquid: scooter refuelling PC13\_3 Liquid: garden equipment - use Covers use in room size of 100 m<sup>3</sup>.

**Ventilation rate** Covers use under typical household ventilation. Unless otherwise stated. PC13\_1 Liquid: automotive refuelling PC13\_2 Liquid: scooter refuelling PC13\_3 Liquid: garden equipment - use Covers outdoor use. PC13\_4 Liquid: Garden equipment - Refuelling Covers use in a one car garage (34 m<sup>3</sup>) under typical ventilation.

### 3. Exposure estimation (Environment 1)

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

### 3. Exposure estimation (Health 1)

**Assessment method** Used ECETOC TRA model.

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

### 4. Guidance to check compliance with the exposure scenario (Health 1)

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



## Exposure scenario

### Use in oil field drilling and production operations - Industrial

#### Identification

|                           |                                                                                                                                                                     |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product name              | Isopropanol                                                                                                                                                         |
| REACH registration number | 01-2119457558-25-XXXX                                                                                                                                               |
| CAS number                | 67-63-0                                                                                                                                                             |
| EC number                 | 200-661-7                                                                                                                                                           |
| EU index number           | 603-117-00-0                                                                                                                                                        |
| Supplier                  | Univar Solutions UK Ltd<br>Aquarius House<br>6 Mid Point Business Park<br>Bradford<br>BD3 7AY<br>+44 1274 267300<br>+44 1274 267306<br>SDS.EMEA@univarsolutions.com |

#### 1. Title of exposure scenario

|               |                                                                                                                                                                                                                        |
|---------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Main title    | Use in oil field drilling and production operations - Industrial                                                                                                                                                       |
| Process scope | Oil field well drilling and production operations (including drilling muds and well cleaning), including material transfers, onsite formulation, well head operations, shaker room activities and related maintenance. |
| Main sector   | SU3 Industrial uses                                                                                                                                                                                                    |

#### Environment

|                                |                                                                                                |
|--------------------------------|------------------------------------------------------------------------------------------------|
| Environmental release category | ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article) |
|--------------------------------|------------------------------------------------------------------------------------------------|

#### Worker

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Process category | PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions<br>PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions<br>PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition<br>PROC4 Chemical production where opportunity for exposure arises<br>PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities<br>PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

#### Product characteristics

## Use in oil field drilling and production operations - Industrial

Not regarded as dangerous for the environment. No exposure scenario required.

### 2. Conditions of use affecting exposure (Workers - Health 1)

#### Product characteristics

**Physical state** Liquid, vapour pressure 0.5 - 10 kPa at STP

**Concentration details** Covers concentrations up to 100 %.

#### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

#### Other given operational conditions affecting workers exposure

**Temperature** Assumes use at not more than 20°C above ambient temperature, unless stated differently.

**Ventilation rate** Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Assumes a good basic standard of occupational hygiene is implemented.

#### Technical conditions and measures at process level (source) to prevent release

**Technical protective measures** Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.

#### Risk management measures

Use suitable eye protection and gloves.

### 3. Exposure estimation (Environment 1)

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

### 3. Exposure estimation (Health 1)

**Assessment method** Used ECETOC TRA model.

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

### 4. Guidance to check compliance with the exposure scenario (Health 1)

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.



## Exposure scenario

### Use in oil field and production operations - Professional

#### Identification

|                           |                                                                                                                                                                     |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product name              | Isopropanol                                                                                                                                                         |
| REACH registration number | 01-2119457558-25-XXXX                                                                                                                                               |
| CAS number                | 67-63-0                                                                                                                                                             |
| EC number                 | 200-661-7                                                                                                                                                           |
| EU index number           | 603-117-00-0                                                                                                                                                        |
| Supplier                  | Univar Solutions UK Ltd<br>Aquarius House<br>6 Mid Point Business Park<br>Bradford<br>BD3 7AY<br>+44 1274 267300<br>+44 1274 267306<br>SDS.EMEA@univarsolutions.com |

#### 1. Title of exposure scenario

|                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|--------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Main title                     | Use in oil field and production operations - Professional                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Process scope                  | Oil field well drilling and production operations (including drilling muds and well cleaning), including material transfers, onsite formulation, well head operations, shaker room activities and related maintenance.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Main sector                    | SU22 Professional uses                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <u>Environment</u>             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Environmental release category | ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <u>Worker</u>                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Process category               | PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions<br>PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions<br>PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition<br>PROC4 Chemical production where opportunity for exposure arises<br>PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities<br>PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities |

#### 2. Conditions of use affecting exposure (Industrial - Environment 1)

##### Product characteristics

## Use in oil field and production operations - Professional

Not regarded as dangerous for the environment. No exposure scenario required.

### 2. Conditions of use affecting exposure (Workers - Health 1)

#### Product characteristics

**Physical state** Liquid, vapour pressure 0.5 - 10 kPa at STP

**Concentration details** Covers concentrations up to 100 %.

#### Frequency and duration of use

Covers daily exposures up to 8 hours (unless stated differently).

#### Other given operational conditions affecting workers exposure

**Temperature** Assumes use at not more than 20°C above ambient temperature, unless stated differently.

**Ventilation rate** Provide enhanced general ventilation by mechanical means.

Assumes a good basic standard of occupational hygiene is implemented.

#### Technical conditions and measures at process level (source) to prevent release

**Technical protective measures** Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and clear transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; Ensure suitable personal protective equipment is available; Clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions.

#### Risk management measures

Use suitable eye protection and gloves.

Gloves should comply with the requirements of EN 374.

### 3. Exposure estimation (Environment 1)

As no environmental hazard was identified, no environmental-related exposure assessment and risk characterisation was performed.

### 3. Exposure estimation (Health 1)

**Assessment method** Used ECETOC TRA model.

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented.

### 4. Guidance to check compliance with the exposure scenario (Health 1)

Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.