

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

Supersedes date 05-Dec-2022

Revision date 02-May-2024

Revision Number 5

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

1.1. Product identifier

Product Code(s)	20256
Safety data sheet number	20256
Product Name	1-PROPOXY-2-PROPANOL
EC Number	216-372-4
CAS No	1569-01-3
Synonyms	DOWANOL PNP GLYCOL ETHER, DOWANOL PNP
Pure substance/mixture	Substance
Molecular weight	118.2

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

Recommended use	Industrial use Professional use Consumer use Distribution of substance Formulation of preparations (mixtures) Solvent Cleaning agent Lubricant Cosmetics Surface coating
Uses advised against	No specific uses advised against are identified

1.3. Details of the supplier of the safety data sheet

Supplier

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

For further information, please contact

E-mail address	SDS.EMEA@univarsolutions.com
Non-Emergency Telephone Number	+44 1274 267300 / +44 1274 267306

1.4. Emergency telephone number

Emergency Telephone	SGS - +32 (0)3 575 55 55 (24h)
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Flammable liquids	Category 3 - (H226)
Serious eye damage/eye irritation	Category 2 - (H319)

2.2. Label elements

**Signal word**

Warning

Hazard statements

H319 - Causes serious eye irritation

H226 - Flammable liquid and vapour

Precautionary statements

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

P280 - Wear protective gloves/protective clothing/eye protection/face protection/hearing protection

P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water

P337 + P313 - If eye irritation persists: Get medical advice/attention

P370 + P378 - In case of fire: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide to extinguish

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

2.3. Other hazards

No information available.

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

Chemical name	Weight-%	EC No (EU Index No)	UK REACH registration number	Classification according to GB CLP (SI 2020/1567 as amended)	Specific concentration limit (SCL)	M-Factor	M-Factor (long-term)
1-PROPOXY-2-PROPANOL 1569-01-3	>99.0%	216-372-4	-	Flam. Liq. 3 (H226) Eye Irrit. 2 (H319)	-	-	-

Full text of H- and EUH-phrases: see section 16This product does not contain candidate substances of very high concern at a concentration $\geq 0.1\%$ (UK REACH Article 59)**SECTION 4: First aid measures****4.1. Description of first aid measures****General advice**

Show this safety data sheet to the doctor in attendance. First aid personnel should wear appropriate protective equipment during any rescue. Use personal protection recommended in Section 8. Use first aid treatment according to the nature of the injury.

Inhalation

Remove to fresh air. Call a doctor.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists. Ensure that eyewash stations and safety showers are close to the workstation location.

Skin contact

Wash off immediately with plenty of water. If symptoms persist, call a doctor.

Ingestion

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

Self-protection of the first aider

Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Use personal protective equipment as required. See section 8 for more information. Avoid contact with skin, eyes or clothing.

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

Symptoms May cause redness and tearing of the eyes. Burning sensation.

Eyes Causes serious eye irritation. Risk of corneal damage.

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

Note to doctors Treat any burns as thermal burns, after decontamination.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable Extinguishing Media Dry chemical. Carbon dioxide (CO₂). Water spray. Alcohol resistant foam.

Large Fire CAUTION: Use of water spray when fighting fire may be inefficient.

Unsuitable extinguishing media Do not scatter spilled material with high pressure water streams.

5.2. Special hazards arising from the substance or mixture

Specific hazards arising from the chemical Risk of ignition. Keep product and empty container away from heat and sources of ignition. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. Sealed containers may rupture when heated.

Hazardous combustion products Burning produces heavy smoke. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

5.3. Advice for firefighters

Special protective equipment and precautions for fire-fighters Evacuate personnel to safe areas. Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. Cool containers with flooding quantities of water until well after fire is out.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Take precautionary measures against static discharges. All equipment used when handling the product must be grounded. Pay attention to flashback. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Do not touch or walk through spilled material. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. See section 8 for more information. Vapours may form explosive mixtures with air.

Other information Ventilate the area. Refer to protective measures listed in Sections 7 and 8.

For emergency responders Use personal protection recommended in Section 8.

6.2. Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Refer to protective measures listed in Sections 7 and 8.

6.3. Methods and material for containment and cleaning up

Methods for containment Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

Methods for cleaning up Take precautionary measures against static discharges. Use clean non-sparking tools to collect absorbed material. Clean contaminated objects and areas thoroughly observing environmental regulations.

Prevention of secondary hazards Observe good chemical hygiene practices.

6.4. Reference to other sections

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use spark-proof tools and explosion-proof equipment. Avoid contact with skin, eyes or clothing. Avoid breathing vapours or mists. Vapours may form explosive mixtures with air. Use personal protection recommended in Section 8. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.
General hygiene considerations	Do not eat, drink or smoke when using this product. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. Regular cleaning of equipment, work area and clothing is recommended. Contaminated work clothing should not be allowed out of the workplace.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labelled containers. Do not store near combustible materials. Keep in an area equipped with sprinklers. Suitable containers: carbon steel; stainless steel; phenolic lined steel drums. Unsuitable containers: aluminium, copper, galvanised iron, galvanised steel. Store away from other materials. See section 10 for more information.
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7.3. Specific end use(s)

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

Risk Management Methods (RMM) The information required is contained in this Safety Data Sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limits	1-PROPOXY-2-PROPANOL TWA: 50 ppm; STEL: 75 ppm (Manuf. Data).
Biological occupational exposure limits	This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.
Information on monitoring procedures	Refer to European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) or equivalent national standard(s). Refer to European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) or equivalent national standard(s). Refer to European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) or equivalent national standard(s).

Derived No Effect Level (DNEL) - Workers

Chemical name	Oral	Dermal	Inhalation
1-PROPOXY-2-PROPANOL 1569-01-3		82.5 mg/kg bw/day [4] [6]	263 mg/m ³ [4] [6]

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

Derived No Effect Level (DNEL) - General Public

Chemical name	Oral	Dermal	Inhalation
1-PROPOXY-2-PROPANOL 1569-01-3	11 mg/kg bw/day [4] [6]	36 mg/kg bw/day [4] [6]	38 mg/m ³ [4] [6]

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

Predicted No Effect Concentration (PNEC)

Chemical name	Freshwater	Freshwater (intermittent release)	Marine water	Marine water (intermittent release)	Air
1-PROPOXY-2-PROPANOL 1569-01-3	0.1 mg/l	1 mg/l	0.01 mg/l		

Chemical name	Freshwater sediment	Marine sediment	Sewage treatment	Soil	Food chain
1-PROPOXY-2-PROPANOL 1569-01-3	0.386 mg/kg dw	0.0386 mg/kg dw	4 mg/l	0.0185 mg/kg dw	4 mg/l

8.2. Exposure controls

Engineering controls Ensure adequate ventilation. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye/face protection Tight sealing safety goggles. Use eye protection according to EN 166.

Hand protection Chemical resistant gloves required for prolonged or repeated contact. Gloves must conform to standard EN 374. Nitrile rubber. Butyl rubber. Neoprene gloves. Ensure that the breakthrough time of the glove material is not exceeded. Refer to glove supplier for information on breakthrough time for specific gloves.

Gloves			
Duration of contact	PPE - Glove material	Glove thickness	Break through time
Long term (repeated)	Nitrile rubber	>0.35 mm	>120 minutes
Short term	Nitrile rubber	≤0.35 mm	>10 minutes

Skin and body protection Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Antistatic footwear.

Respiratory protection None under normal use conditions. In case of inadequate ventilation wear respiratory protection. Filter type: Type A.

General hygiene considerations Do not eat, drink or smoke when using this product. Wear suitable gloves and eye/face protection. Wash hands before breaks and immediately after handling the product. Regular cleaning of equipment, work area and clothing is recommended. Contaminated work clothing should not be allowed out of the workplace.

Environmental exposure controls Keep out of drains, sewers, ditches and waterways. Local authorities should be advised if significant spillages cannot be contained. Dispose of this material and its container to hazardous or special waste collection point. See section 13 for more information. See section 7 for more information.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Liquid
Colour	Colourless
Odour	Ether.
Odour threshold	No information available

Property	Values	Remarks • Method
Melting point / freezing point	-70 °C	Read-across.
Initial boiling point and boiling range	149 °C	@ 1013 hPa. Read-across.
Flammability		Not applicable.
Flammability Limit in Air		Read-across.
Upper flammability or explosive limits	10.6% vol	
Lower flammability or explosive limits	1.3% vol	
Flash point	46 °C	@ 1013 hPa. Closed cup.
Autoignition temperature	252 °C	@ 1013 hPa. Read-across.
Decomposition temperature		No information available.
pH		No information available.
pH (as aqueous solution)		No information available.
Kinematic viscosity	2.71 mm ² /s	@ 25 °C. Read-across.
Dynamic viscosity	2.389 mPa s	@ 25 °C. Read-across.
Water solubility	> 1000 g/l, Completely soluble	@ 30 °C. Read-across.
Solubility(ies)		No information available.
Partition coefficient	log Pow: 0.621, Calculation method	No information available.
Vapour pressure	3.8 hPa	@ 25 °C. Read-across.
Relative density	0.8805	@ 25 °C. Read-across.
Bulk density		No information available
Liquid Density	No information available	No information available

Relative vapour density	No information available.
Particle characteristics	No information available.
Particle Size	No information available
Particle Size Distribution	No information available
Explosive properties	Not considered to be explosive.
Oxidising properties	Does not meet the criteria for classification as oxidising

9.2. Other information

Molecular weight 118.2

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity No information available.

10.2. Chemical stability

Stability Stable under recommended storage conditions. See section 7 for more information.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Conditions to avoid Heat, flames and sparks. Do not distill to dryness. Product can oxidise at elevated temperatures. Due to gaseous decomposition products, over-pressure can occur in tightly sealed containers.

10.5. Incompatible materials

Incompatible materials Avoid contact with: Strong acids. Strong bases. Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products Thermal decomposition can lead to release of irritating and toxic gases and vapours. Aldehydes. Ketone. Organic Acids.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Information on likely routes of exposure

Product Information	Product does not present an acute toxicity hazard based on known or supplied information
Inhalation	Inhalation of vapours in high concentration may cause irritation of respiratory system.
Eye contact	Vapour may cause irritation.
Skin contact	Prolonged contact may cause redness and irritation. Dryness and/or cracking. Prolonged or repeated exposure may cause: Burns.
Ingestion	Low order of toxicity based on components. Ingestion of larger amounts may cause defects to the central nervous system (e.g. dizziness, headache).

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms May cause redness and tearing of the eyes. Causes serious eye irritation.

Acute toxicity

Numerical measures of toxicity

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
1-PROPOXY-2-PROPANOL	> 2000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	8.34 mg/l (Rat) 4h, vapour

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

Skin corrosion/irritation	Based on available data the classification criteria are not met. Prolonged contact may cause redness and irritation.
Serious eye damage/eye irritation	Classification based on data available for ingredients. Causes serious eye irritation. On basis of test data.
Respiratory or skin sensitisation	Based on available data the classification criteria are not met.
Germ cell mutagenicity	Based on available data the classification criteria are not met.
Carcinogenicity	Based on available data the classification criteria are not met.
Reproductive toxicity	Based on available data the classification criteria are not met.
STOT - single exposure	Based on available data the classification criteria are not met.
STOT - repeated exposure	Based on available data the classification criteria are not met.
Aspiration hazard	Based on available data the classification criteria are not met.
Other adverse effects	No information available.

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity Based on available data, the classification criteria are not met.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1-PROPOXY-2-PROPANOL	ErC50: 1466 mg/l (96h, Pseudokirchneriella subcapitata)	LC50: >100 mg/l (96h, Oncorhynchus mykiss)	EC50: 3800 mg/l (16h, Bacteria)	LC50: >100 mg/l (48h, Daphnia)

12.2. Persistence and degradability

Persistence and degradability Readily biodegradable.

1-PROPOXY-2-PROPANOL (1569-01-3)

Method	Exposure time	Value	Results
OECD Test No. 301A: Ready Biodegradability: DOC Die-Away Test (TG 301 A)	28 days	91.5% Biodegradation	Readily biodegradable

12.3. Bioaccumulative potential

Bioaccumulation Not likely to bioaccumulate.

Bioconcentration factor (BCF) < 100; log Pow < 3

Chemical name	Partition coefficient
1-PROPOXY-2-PROPANOL	log Pow = 0.621

12.4. Mobility in soil

Mobility in soil Soluble in water.

12.5. Results of PBT and vPvB assessment

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

Chemical name	PBT and vPvB assessment
1-PROPOXY-2-PROPANOL	The substance is not PBT / vPvB

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste from residues/unused products	Waste is classified as hazardous waste. Disposal to licensed waste disposal site in accordance with the local Waste Disposal Authority.
Contaminated packaging	Empty remaining contents. Do not reuse empty containers. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers. Empty containers should be taken to an approved waste handling site for recycling or disposal.
Other information	No information available.

SECTION 14: Transport information

IATA

14.1 UN number or ID number	UN1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (1-PROPOXY-2-PROPANOL)
14.3 Transport hazard class(es)	3
14.4 Packing group	III
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	A3
ERG Code	3L

IMDG

14.1 UN number or ID number	UN1993
UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (1-PROPOXY-2-PROPANOL)
14.3 Transport hazard class(es)	3
14.4 Packing group	III
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	223, 274, 955
EmS-No	F-E, S-E
14.7 Maritime transport in bulk according to IMO instruments	No information available

RID

14.1 UN number or ID number	UN1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (1-PROPOXY-2-PROPANOL)
14.3 Transport hazard class(es)	3
14.4 Packing group	III
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	274, 601
Classification code	F1

ADR

14.1 UN number or ID number	UN1993
14.2 UN proper shipping name	FLAMMABLE LIQUID, N.O.S. (1-PROPOXY-2-PROPANOL)
14.3 Transport hazard class(es)	3
14.4 Packing group	III
14.5 Environmental hazards	Not applicable
14.6 Special precautions for user	
Special Provisions	274, 601
Classification code	F1
Tunnel restriction code	(D/E)

SECTION 15: Regulatory information

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

National regulations

Authorisations and/or restrictions on use:

This product contains one or more substances subject to restriction (UK REACH - Annex XVII).

This product does not contain substances subject to authorisation (UK REACH - Annex XIV).

Persistent Organic Pollutants

Not applicable

Export Notification requirements

Not applicable

Dangerous substance category per COMAH Regulations 2015 (as amended)

P5c - FLAMMABLE LIQUIDS

Named dangerous substances per COMAH Regulations 2015 (as amended)

Not applicable

The Ozone-Depleting Substances Regulations 2015

Not applicable

The Biocidal Products Regulations 2001 (as amended)

Not applicable

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

Not applicable

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

Not applicable

International Inventories

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

Legend:**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory**DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List**EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances**ENCS** - Japan Existing and New Chemical Substances**IECSC** - China Inventory of Existing Chemical Substances**KECL** - Korean Existing and Evaluated Chemical Substances**PICCS** - Philippines Inventory of Chemicals and Chemical Substances**AIIC** - Australian Inventory of Industrial Chemicals**NZIoC** - New Zealand Inventory of Chemicals**15.2. Chemical safety assessment****Chemical Safety Report**

A Chemical Safety Assessment has been carried out for this substance

SECTION 16: Other information**Key or legend to abbreviations and acronyms used in the safety data sheet****Legend**

SVHC: Substances of Very High Concern for Authorisation:

PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances

vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances

Legend Section 8: Exposure controls/personal protection

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

Revision Note **SDS sections updated 1 2 3 4 5 6 7 8 9 10 11 12 13 15 16****Classification procedure**

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

Carcinogenicity	Calculation method
Reproductive toxicity	Calculation method
STOT - single exposure	Calculation method
STOT - repeated exposure	Calculation method
Acute aquatic toxicity	Calculation method
Chronic aquatic toxicity	Calculation method
Aspiration hazard	Calculation method
Ozone	Calculation method

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

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

Prepared By	J Forth
Supersedes date	05-Dec-2022
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This material safety data sheet complies with the requirements of UK REACH Regulations (SI 2019/758 as amended)
Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

Disclaimer

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

End of Safety Data Sheet

Exposure scenario

Use as a process solvent

Identification

Product name	1-Propoxy-2-propanol
REACH registration number	01-2119474443-37-XXXX
CAS number	1569-01-3
EC number	216-372-4
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. Title of exposure scenario

Main title	Use as a process solvent
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)
SPERC	ESVOC SPERC 4.21a.v1

Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC15 Use as laboratory reagent.
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Daily amount per site: 4.2 kg
Maximum allowable site tonnage (Msafe), based on release following total wastewater treatment removal: 1,111 kg/day

Use as a process solvent

Frequency and duration of use

Emission days: 300 days/year
Continuous release.

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Risk management measures

Technical measures Store finished products in closed containers (e.g. bulk tanks, drums, cans). Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases.

STP details Estimated substance removal from wastewater via domestic sewage treatment: 87%
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs: 87%

Conditions and measures related to external treatment of waste for disposal

Waste treatment External treatment and disposal of waste should comply with applicable local and/or national regulations. Incinerate, absorb or adsorb vapours stripped from solution whenever necessary.

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

Product characteristics

Physical state Liquid, vapour pressure < 0.5 kPa at STP

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

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

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.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Use suitable eye protection.
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
Wear suitable gloves tested to EN374.

3. Exposure estimation (Environment 1)

Assessment method Used EUSES model.

Environmental exposure Fresh water: Exposure 0.00012 mg/l, PNEC 0.1 mg/l, RCR 0.0012
freshwater sediment: Exposure 0.00047 mg/kg, PNEC 0.386 mg/kg, RCR 0.0012
Marine water: Exposure 0.000017 mg/l, PNEC 0.01 mg/l, RCR 0.0017
marine sediment: Exposure 0.000064 mg/kg, PNEC 0.0386 mg/kg, RCR 0.0017
Soil: Exposure 0.000070 mg/kg, PNEC 0.0185 mg/kg, RCR 0.0038

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

Use as a process solvent

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures.

3. Exposure estimation (Health 1)

Assessment method	ECETOC TRA v2.0 Worker
Exposure	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions Worker - inhalation, long-term - systemic: Exposure 0.05 mg/m³, DNEL 263 mg/m³, RCR 0.0002 Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.004 PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions Worker - inhalation, long-term - systemic: Exposure 4.93 mg/m³, DNEL 263 mg/m³, RCR 0.02 Worker - dermal, long-term - systemic: Exposure 1.37 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.02 PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition Worker - inhalation, long-term - systemic: Exposure 14.78 mg/m³, DNEL 263 mg/m³, RCR 0.06 Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.004 PROC4 Chemical production where opportunity for exposure arises Worker - inhalation, long-term - systemic: Exposure 24.63 mg/m³, DNEL 263 mg/m³, RCR 0.09 Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.08 PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities Worker - inhalation, long-term - systemic: Exposure 24.63 mg/m³, DNEL 263 mg/m³, RCR 0.09 Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.08 PROC15 Use as laboratory reagent. Worker - inhalation, long-term - systemic: Exposure 24.63 mg/m³, DNEL 263 mg/m³, RCR 0.09 Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.004

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

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.

Exposure scenario

Distribution of substance, Industrial

Identification

Product name	1-Propoxy-2-propanol
REACH registration number	01-2119474443-37-XXXX
CAS number	1569-01-3
EC number	216-372-4
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. Title of exposure scenario

Main title	Distribution of substance, Industrial
Main sector	SU3 Industrial uses

Environment

Environmental release category	ERC1 Manufacture of the substance ERC2 Formulation into mixture ERC3 Formulation into solid matrix ERC4 Use of non-reactive processing aid at industrial site (no inclusion into or onto article) ERC5 Use at industrial site leading to inclusion into/onto article ERC6a Use of intermediate ERC7 Use of functional fluid at industrial site
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SPERC	ESVOC SPERC 1.1b.v1
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Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC15 Use as laboratory reagent.
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Distribution of substance, Industrial

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

Amounts used

Daily amount per site: 11000 kg
Maximum allowable site tonnage (Msafe), based on release following total wastewater treatment removal: 1,075 kg/day

Frequency and duration of use

Emission days: 300 days/year
Continuous release.

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Risk management measures

Technical measures Store finished products in closed containers (e.g. bulk tanks, drums, cans). Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases.

STP details Estimated substance removal from wastewater via domestic sewage treatment: 87%
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs: 87%

Conditions and measures related to external treatment of waste for disposal

Waste treatment External treatment and disposal of waste should comply with applicable local and/or national regulations.

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

Product characteristics

Physical state Liquid, vapour pressure < 0.5 kPa at STP

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

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

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.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Use suitable eye protection.
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
Wear suitable gloves tested to EN374.

3. Exposure estimation (Environment 1)

Assessment method Used EUSES model.

Distribution of substance, Industrial

Environmental exposure	Fresh water: Exposure 0.00081 mg/l, PNEC 0.1 mg/l, RCR 0.0081
	freshwater sediment: Exposure 0.0031 mg/kg, PNEC 0.386 mg/kg, RCR 0.0081
	Marine water: Exposure 0.000086 mg/l, PNEC 0.01 mg/l, RCR 0.0086
	marine sediment: Exposure 0.00033 mg/kg, PNEC 0.0386 mg/kg, RCR 0.0086
	Soil: Exposure 0.00038 mg/kg, PNEC 0.0185 mg/kg, RCR 0.020

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management

3. Exposure estimation (Health 1)

measures.

Assessment method	ECETOC TRA v2.0 Worker
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Distribution of substance, Industrial

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
Worker - inhalation, long-term - systemic: Exposure 0.05 mg/m³, DNEL 263 mg/m³, RCR 0.0002
Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.004

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
Worker - inhalation, long-term - systemic: Exposure 4.93 mg/m³, DNEL 263 mg/m³, RCR 0.02
Worker - dermal, long-term - systemic: Exposure 1.37 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.02

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
Worker - inhalation, long-term - systemic: Exposure 14.78 mg/m³, DNEL 263 mg/m³, RCR 0.06
Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.004

PROC4 Chemical production where opportunity for exposure arises
Worker - inhalation, long-term - systemic: Exposure 24.63 mg/m³, DNEL 263 mg/m³, RCR 0.09
Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.08

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
Worker - inhalation, long-term - systemic: Exposure 49.25 mg/m³, DNEL 263 mg/m³, RCR 0.19
Worker - dermal, long-term - systemic: Exposure 2.74 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.03

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
Worker - inhalation, long-term - systemic: Exposure 24.63 mg/m³, DNEL 263 mg/m³, RCR 0.09
Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.08

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
Worker - inhalation, long-term - systemic: Exposure 24.63 mg/m³, DNEL 263 mg/m³, RCR 0.09
Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.08

PROC15 Use as laboratory reagent.
Worker - inhalation, long-term - systemic: Exposure 24.63 mg/m³, DNEL 263 mg/m³, RCR 0.09
Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.004

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

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.

Exposure scenario

Formulation & (re)packing of substances and mixtures, Industrial

Identification

Product name	1-Propoxy-2-propanol
REACH registration number	01-2119474443-37-XXXX
CAS number	1569-01-3
EC number	216-372-4
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. Title of exposure scenario

Main title	Formulation & (re)packing of substances and mixtures, Industrial
Main sector	SU3 Industrial uses

Environment

Environmental release category	ERC2 Formulation into mixture
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SPERC	ESVOC SPERC 2.2.v1
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Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC14 Tableting, compression, extrusion, pelletisation, granulation PROC15 Use as laboratory reagent.
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Formulation & (re)packing of substances and mixtures, Industrial

Daily amount per site: 2200 kg
Maximum allowable site tonnage (Msafe), based on release following total wastewater treatment removal: 3,163 kg/day

Frequency and duration of use

Emission days: 300 days/year
Continuous release.

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Risk management measures

Technical measures Store finished products in closed containers (e.g. bulk tanks, drums, cans). Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases.

STP details Estimated substance removal from wastewater via domestic sewage treatment: 87%
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs: 87%

Conditions and measures related to external treatment of waste for disposal

Waste treatment External treatment and disposal of waste should comply with applicable local and/or national regulations.

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

Product characteristics

Physical state Liquid, vapour pressure < 0.5 kPa at STP
Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

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

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.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Use suitable eye protection.
PROC5 Mixing or blending in batch processes
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
Wear suitable gloves tested to EN374.

3. Exposure estimation (Environment 1)

Assessment method Used EUSES model.

Formulation & (re)packing of substances and mixtures, Industrial

Environmental exposure	Fresh water: Exposure 0.069 mg/l, PNEC 0.1 mg/l, RCR 0.69
	freshwater sediment: Exposure 0.27 mg/kg, PNEC 0.386 mg/kg, RCR 0.69
	Marine water: Exposure 0.007 mg/l, PNEC 0.01 mg/l, RCR 0.7
	marine sediment: Exposure 0.027 mg/kg, PNEC 0.0386 mg/kg, RCR 0.7
	Soil: Exposure 0.0038 mg/kg, PNEC 0.0185 mg/kg, RCR 0.21

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC

3. Exposure estimation (Health 1)

factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).

Assessment method	ECETOC TRA v2.0 Worker
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Formulation & (re)packing of substances and mixtures, Industrial

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
 Worker - inhalation, long-term - systemic: Exposure 0.05 mg/m³, DNEL 263 mg/m³, RCR 0.0002
 Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.004

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
 Worker - inhalation, long-term - systemic: Exposure 4.93 mg/m³, DNEL 263 mg/m³, RCR 0.02
 Worker - dermal, long-term - systemic: Exposure 1.37 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.02

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
 Worker - inhalation, long-term - systemic: Exposure 14.78 mg/m³, DNEL 263 mg/m³, RCR 0.06
 Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.004

PROC4 Chemical production where opportunity for exposure arises
 Worker - inhalation, long-term - systemic: Exposure 24.63 mg/m³, DNEL 263 mg/m³, RCR 0.09
 Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.08

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
 Worker - inhalation, long-term - systemic: Exposure 49.25 mg/m³, DNEL 263 mg/m³, RCR 0.19
 Worker - dermal, long-term - systemic: Exposure 2.74 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.03

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
 Worker - inhalation, long-term - systemic: Exposure 24.63 mg/m³, DNEL 263 mg/m³, RCR 0.09
 Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.08

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
 Worker - inhalation, long-term - systemic: Exposure 24.63 mg/m³, DNEL 263 mg/m³, RCR 0.09
 Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.08

PROC15 Use as laboratory reagent.
 Worker - inhalation, long-term - systemic: Exposure 24.63 mg/m³, DNEL 263 mg/m³, RCR 0.09
 Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.004

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
 Batch processes at elevated temperatures
 Worker - inhalation, long-term - systemic: Exposure 123.13 mg/m³, DNEL 263 mg/m³, RCR 0.47
 Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.08

PROC5 Mixing or blending in batch processes
 Worker - inhalation, long-term - systemic: Exposure 24.63 mg/m³, DNEL 263 mg/m³, RCR 0.09
 Worker - dermal, long-term - systemic: Exposure 2.74 mg/kg/day, DNEL 82.5 mg/kg/day,

Formulation & (re)packing of substances and mixtures, Industrial

RCR 0.03

PROC14 Tableting, compression, extrusion, pelletisation, granulation

Worker - inhalation, long-term - systemic: Exposure 24.63 mg/m³, DNEL 263 mg/m³, RCR 0.09

Worker - dermal, long-term - systemic: Exposure 3.43 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.04

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

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure scenario Industrial Use in Coatings (Water Based)

Identification

Product name	1-Propoxy-2-propanol
REACH registration number	01-2119474443-37-XXXX
CAS number	1569-01-3
EC number	216-372-4
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. Title of exposure scenario

Main title	Industrial Use in Coatings (Water Based)
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)
SPERC	ESVOC SPERC 4.3a.v1

Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC7 Industrial spraying PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC13 Treatment of articles by dipping and pouring. PROC15 Use as laboratory reagent.
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Industrial Use in Coatings (Water Based)

Daily amount per site: 367 kg
Maximum allowable site tonnage (Msafe), based on release following total wastewater treatment removal: 791 kg/day

Frequency and duration of use

Emission days: 300 days/year
Continuous release.

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Risk management measures

Technical measures Store finished products in closed containers (e.g. bulk tanks, drums, cans). Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases.

STP details Estimated substance removal from wastewater via domestic sewage treatment: 87.4%
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs: 87.4%

Conditions and measures related to external treatment of waste for disposal

Waste treatment External treatment and disposal of waste should comply with applicable local and/or national regulations.

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

Product characteristics

Physical state Liquid, vapour pressure < 0.5 kPa at STP
Concentration details Covers concentrations up to 25 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

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

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.
PROC7 Industrial spraying Spraying (automatic/robotic) Carry out in a vented booth or extracted enclosure.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.

Risk management measures

Industrial Use in Coatings (Water Based)

Use suitable eye protection.

PROC5 Mixing or blending in batch processes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC10 Roller application or brushing

PROC13 Treatment of articles by dipping and pouring.

Wear suitable gloves tested to EN374.

PROC7 Industrial spraying

Manual spraying

Wear a respirator conforming to EN140 with Type A filter or better.

Wear chemically-resistant gloves (tested to EN374) in combination with 'basic' employee training.

3. Exposure estimation (Environment 1)

Assessment method Used EUSES model.

Environmental exposure Fresh water: Exposure 0.046 mg/l, PNEC 0.1 mg/l, RCR 0.46
freshwater sediment: Exposure 0.18 mg/kg, PNEC 0.386 mg/kg, RCR 0.46
Marine water: Exposure 0.0046 mg/l, PNEC 0.01 mg/l, RCR 0.46
marine sediment: Exposure 0.018 mg/kg, PNEC 0.0386 mg/kg, RCR 0.46
Soil: Exposure 0.011 mg/kg, PNEC 0.0185 mg/kg, RCR 0.62

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC

3. Exposure estimation (Health 1)

factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).

Assessment method ECETOC TRA v2.0 Worker

Industrial Use in Coatings (Water Based)

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
 Worker - inhalation, long-term - systemic: Exposure 0.03 mg/m³, DNEL 263 mg/m³, RCR 0.0001
 Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.004

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
 Worker - inhalation, long-term - systemic: Exposure 2.96 mg/m³, DNEL 263 mg/m³, RCR 0.01
 Worker - dermal, long-term - systemic: Exposure 1.37 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.02

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
 Film formation - force drying (50 - 100°C), stoving (> 100°C), UV/EB radiation curing
 Worker - inhalation, long-term - systemic: Exposure 29.55 mg/m³, DNEL 263 mg/m³, RCR 0.11
 Worker - dermal, long-term - systemic: Exposure 1.37 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.02

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
 Worker - inhalation, long-term - systemic: Exposure 8.87 mg/m³, DNEL 263 mg/m³, RCR 0.03
 Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.004

PROC4 Chemical production where opportunity for exposure arises
 Worker - inhalation, long-term - systemic: Exposure 14.78 mg/m³, DNEL 263 mg/m³, RCR 0.06
 Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.08

PROC5 Mixing or blending in batch processes
 Worker - inhalation, long-term - systemic: Exposure 14.78 mg/m³, DNEL 263 mg/m³, RCR 0.06
 Worker - dermal, long-term - systemic: Exposure 2.74 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.03

PROC7 Industrial spraying
 Spraying (automatic/robotic)
 Worker - inhalation, long-term - systemic: Exposure 14.78 mg/m³, DNEL 263 mg/m³, RCR 0.06
 Worker - dermal, long-term - systemic: Exposure 2.14 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.03

PROC7 Industrial spraying
 Manual spraying
 Worker - inhalation, long-term - systemic: Exposure 29.55 mg/m³, DNEL 263 mg/m³, RCR 0.11
 Worker - dermal, long-term - systemic: Exposure 4.29 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.05

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
 Worker - inhalation, long-term - systemic: Exposure 29.55 mg/m³, DNEL 263 mg/m³, RCR 0.11
 Worker - dermal, long-term - systemic: Exposure 2.74 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.03

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
 Worker - inhalation, long-term - systemic: Exposure 14.78 mg/m³, DNEL 263 mg/m³, RCR 0.06
 Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.08

Industrial Use in Coatings (Water Based)

RCR 0.08

PROC13 Treatment of articles by dipping and pouring.

Worker - inhalation, long-term - systemic: Exposure 29.55 mg/m³, DNEL 263 mg/m³, RCR 0.11

Worker - dermal, long-term - systemic: Exposure 2.74 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.03

PROC15 Use as laboratory reagent.

Worker - inhalation, long-term - systemic: Exposure 14.78 mg/m³, DNEL 263 mg/m³, RCR 0.06

Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.004

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

Predicted exposures are not expected to exceed the DN(M)EL when the Risk Management Measures/Operational Conditions outlined in Section 2 are implemented. Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels.

Exposure scenario

Professional Use in Coatings (Water Based)

Identification

Product name	1-Propoxy-2-propanol
REACH registration number	01-2119474443-37-XXXX
CAS number	1569-01-3
EC number	216-372-4
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. Title of exposure scenario

Main title	Professional Use in Coatings (Water Based)
Main sector	SU22 Professional uses

Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
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SPERC	ESVOC SPERC 8.3b.v1
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Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC5 Mixing or blending in batch processes PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring. PROC15 Use as laboratory reagent. PROC19 Manual activities involving hand contact
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Professional Use in Coatings (Water Based)

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

Amounts used

Daily amount per site: 0.063 kg
Maximum allowable site tonnage (Msafe), based on release following total wastewater treatment removal: 69 kg/day

Frequency and duration of use

Emission days: 300 days/year
Continuous release.

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Risk management measures

Technical measures Store finished products in closed containers (e.g. bulk tanks, drums, cans). Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases.

STP details Estimated substance removal from wastewater via domestic sewage treatment: 87.4%
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant) RMMs: 87.4%

Conditions and measures related to external treatment of waste for disposal

Waste treatment External treatment and disposal of waste should comply with applicable local and/or national regulations.

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

Product characteristics

Physical state Liquid, vapour pressure < 0.5 kPa at STP

Concentration details Covers concentrations up to 100 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Setting Indoor/outdoor use.

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

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.
PROC11 Non industrial spraying Indoor. Carry out in a vented booth or extracted enclosure.
PROC19 Manual activities involving hand contact Limit the substance content in the product to 25%.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.
PROC19 Manual activities involving hand contact Avoid carrying out operation for more than 4 hours.

Risk management measures

Professional Use in Coatings (Water Based)

Use suitable eye protection.

PROC5 Mixing or blending in batch processes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC13 Treatment of articles by dipping and pouring.

Wear suitable gloves tested to EN374.

PROC10 Roller application or brushing

PROC19 Manual activities involving hand contact

Wear chemically-resistant gloves (tested to EN374) in combination with specific activity training.

PROC11 Non industrial spraying

Outdoor.

Wear a respirator conforming to EN140 with Type A filter or better.

Wear chemically-resistant gloves (tested to EN374) in combination with 'basic' employee training.

PROC11 Non industrial spraying

Indoor.

Wear chemically-resistant gloves (tested to EN374) in combination with specific activity training.

3. Exposure estimation (Environment 1)

Assessment method	Used EUSES model.
Environmental exposure	Fresh water: Exposure 0.000134 mg/l, PNEC 0.1 mg/l, RCR 0.0013 freshwater sediment: Exposure 0.00048 mg/kg, PNEC 0.386 mg/kg, RCR 0.0013 Marine water: Exposure 0.000017 mg/l, PNEC 0.01 mg/l, RCR 0.0017 marine sediment: Exposure 0.000066 mg/kg, PNEC 0.0386 mg/kg, RCR 0.0017 Soil: Exposure 0.000065 mg/kg, PNEC 0.0185 mg/kg, RCR 0.0035

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC

3. Exposure estimation (Health 1)

factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).

Assessment method	ECETOC TRA v2.0 Worker
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Professional Use in Coatings (Water Based)

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - systemic: Exposure 0.05 mg/m³, DNEL 263 mg/m³, RCR 0.0002

Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.004

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

Worker - inhalation, long-term - systemic: Exposure 24.63 mg/m³, DNEL 263 mg/m³, RCR 0.09

Worker - dermal, long-term - systemic: Exposure 1.37 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.02

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

Worker - inhalation, long-term - systemic: Exposure 14.78 mg/m³, DNEL 263 mg/m³, RCR 0.06

Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.004

PROC4 Chemical production where opportunity for exposure arises

Worker - inhalation, long-term - systemic: Exposure 49.25 mg/m³, DNEL 263 mg/m³, RCR 0.19

Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.08

PROC5 Mixing or blending in batch processes

Worker - inhalation, long-term - systemic: Exposure 49.25 mg/m³, DNEL 263 mg/m³, RCR 0.19

Worker - dermal, long-term - systemic: Exposure 2.74 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.03

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

Worker - inhalation, long-term - systemic: Exposure 123.13 mg/m³, DNEL 263 mg/m³, RCR 0.47

Worker - dermal, long-term - systemic: Exposure 2.74 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.03

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

Worker - inhalation, long-term - systemic: Exposure 49.25 mg/m³, DNEL 263 mg/m³, RCR 0.19

Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.08

PROC10 Roller application or brushing

Worker - inhalation, long-term - systemic: Exposure 123.13 mg/m³, DNEL 263 mg/m³, RCR 0.47

Worker - dermal, long-term - systemic: Exposure 1.37 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.02

PROC11 Non industrial spraying

Outdoor.

Worker - inhalation, long-term - systemic: Exposure 49.25 mg/m³, DNEL 263 mg/m³, RCR 0.19

Worker - dermal, long-term - systemic: Exposure 5.36 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.06

PROC11 Non industrial spraying

Indoor.

Worker - inhalation, long-term - systemic: Exposure 98.5 mg/m³, DNEL 263 mg/m³, RCR 0.37

Worker - dermal, long-term - systemic: Exposure 0.11 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.001

Professional Use in Coatings (Water Based)

PROC13 Treatment of articles by dipping and pouring.

Worker - inhalation, long-term - systemic: Exposure 49.25 mg/m³, DNEL 263 mg/m³, RCR 0.19

Worker - dermal, long-term - systemic: Exposure 2.74 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.03

PROC15 Use as laboratory reagent.

Worker - inhalation, long-term - systemic: Exposure 49.25 mg/m³, DNEL 263 mg/m³, RCR 0.19

Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.004

PROC19 Manual activities involving hand contact

Worker - inhalation, long-term - systemic: Exposure 44.33 mg/m³, DNEL 263 mg/m³, RCR 0.17

Worker - dermal, long-term - systemic: Exposure 7.07 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.09

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

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

Identification

Product name	1-Propoxy-2-propanol
REACH registration number	01-2119474443-37-XXXX
CAS number	1569-01-3
EC number	216-372-4
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. Title of exposure scenario

Main title	Use in Coatings, Consumer
Product category	PC1 Adhesives, sealants. PC9a Coatings and paints, thinners, paint removers.
Main sector	SU21 Consumer uses

Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
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SPERC	ESVOC SPERC 8.3c.v1
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2. Conditions of use affecting exposure (Non-industrial - Environment 1)

Frequency and duration of use

Emission days: 365 days/year

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100
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Risk management measures

STP type	Municipal STP.
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 87.4%

Conditions and measures related to external treatment of waste for disposal

Use in Coatings, Consumer

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

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

Product characteristics

Concentration details Concentration of substance in product: 5%

Amounts used

PC1 Adhesives, sealants.
Amount per use: 100 g
PC9a Coatings and paints, thinners, paint removers.
Amount per use: 1250 g

Frequency and duration of use

Covers daily exposure up to 2hours

Other given operational conditions affecting Non-industrial exposure

Room size Avoid using in room size less than 10 m³.

Ventilation rate Ensure doors and windows are opened.

3. Exposure estimation (Environment 1)

Assessment method Used EUSES model.

Environmental exposure Fresh water: Exposure 0.00012 mg/l, PNEC 0.1 mg/l, RCR 0.0012
freshwater sediment: Exposure 0.00047 mg/kg, PNEC 0.386 mg/kg, RCR 0.0012
Marine water: Exposure 0.000017 mg/l, PNEC 0.01 mg/l, RCR 0.0017
marine sediment: Exposure 0.000065 mg/kg, PNEC 0.0386 mg/kg, RCR 0.0017
Soil: Exposure 0.000065 mg/kg, PNEC 0.0185 mg/kg, RCR 0.0035

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC

3. Exposure estimation (Health 1)

factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).

Assessment method The ECETOC TRA tool has been used to estimate consumer exposures, unless otherwise indicated.

Exposure PC9a Coatings and paints, thinners, paint removers.
Consumer - inhalation, long-term - systemic: Exposure 15.1 mg/m³, DNEL 38 mg/m³, RCR 0.40
Consumer - dermal, long-term - systemic: Exposure 0.424 mg/kg/day, DNEL 36 mg/kg/day, RCR 0.01
PC1 Adhesives, sealants.
Consumer - dermal, long-term - systemic: Exposure 0.417 mg/kg/day, DNEL 36 mg/kg/day, RCR 0.01
Consumer - inhalation, long-term - systemic: Exposure 7.8 mg/m³, DNEL 38 mg/m³, RCR 0.21

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

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.

Exposure scenario

Use in Cleaning Agents, Professional

Identification

Product name	1-Propoxy-2-propanol
REACH registration number	01-2119474443-37-XXXX
CAS number	1569-01-3
EC number	216-372-4
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. Title of exposure scenario

Main title	Use in Cleaning Agents, Professional
Main sector	SU22 Professional uses

Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
SPERC	ESVOC SPERC 8.4b.v1

Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring.
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Use in Cleaning Agents, Professional

Maximum allowable site tonnage (Msafe), based on release following total wastewater treatment removal: 74 kg/day

Frequency and duration of use

Emission days: 365 days/year
Continuous release.

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Risk management measures

STP details Estimated substance removal from wastewater via domestic sewage treatment: 87.4%
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant)
RMMs: 87.4%

Conditions and measures related to external treatment of waste for disposal

Waste treatment External treatment and disposal of waste should comply with applicable local and/or national regulations.

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

Product characteristics

Physical state Liquid, vapour pressure < 0.5 kPa at STP
Concentration details Covers concentrations up to 25 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Setting Indoor/outdoor use.
Temperature Assumes activities are at ambient temperature (unless stated differently).

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.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.
PROC11 Non industrial spraying Avoid carrying out operation for more than 4 hours.

Risk management measures

Use suitable eye protection.
PROC4 Chemical production where opportunity for exposure arises
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
PROC10 Roller application or brushing
PROC13 Treatment of articles by dipping and pouring.
Wear suitable gloves tested to EN374.
PROC11 Non industrial spraying
Wear chemically-resistant gloves (tested to EN374) in combination with specific activity training.

3. Exposure estimation (Environment 1)

Use in Cleaning Agents, Professional

Assessment method	Used EUSES model.
Environmental exposure	Fresh water: Exposure 0.00124 mg/l, PNEC 0.1 mg/l, RCR 0.0012 freshwater sediment: Exposure 0.00047 mg/kg, PNEC 0.386 mg/kg, RCR 0.0012 Marine water: Exposure 0.000017 mg/l, PNEC 0.01 mg/l, RCR 0.0017 marine sediment: Exposure 0.000064 mg/kg, PNEC 0.0386 mg/kg, RCR 0.0017 Soil: Exposure 0.000065 mg/kg, PNEC 0.0185 mg/kg, RCR 0.0035

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC

3. Exposure estimation (Health 1)

factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).

Assessment method	ECETOC TRA v2.0 Worker
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Use in Cleaning Agents, Professional

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
Worker - inhalation, long-term - systemic: Exposure 0.03 mg/m³, DNEL 263 mg/m³, RCR 0.0001
Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.004

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
Worker - inhalation, long-term - systemic: Exposure 14.78 mg/m³, DNEL 263 mg/m³, RCR 0.06
Worker - dermal, long-term - systemic: Exposure 1.37 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.02

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
Worker - inhalation, long-term - systemic: Exposure 8.87 mg/m³, DNEL 263 mg/m³, RCR 0.03
Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.004

PROC4 Chemical production where opportunity for exposure arises
Worker - inhalation, long-term - systemic: Exposure 29.55 mg/m³, DNEL 263 mg/m³, RCR 0.11
Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.08

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
Worker - inhalation, long-term - systemic: Exposure 29.55 mg/m³, DNEL 263 mg/m³, RCR 0.11
Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.08

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
Worker - inhalation, long-term - systemic: Exposure 73.88 mg/m³, DNEL 263 mg/m³, RCR 0.28
Worker - dermal, long-term - systemic: Exposure 2.74 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.03

PROC13 Treatment of articles by dipping and pouring.
Worker - inhalation, long-term - systemic: Exposure 29.55 mg/m³, DNEL 263 mg/m³, RCR 0.11
Worker - dermal, long-term - systemic: Exposure 2.74 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.03

PROC10 Roller application or brushing
Worker - inhalation, long-term - systemic: Exposure 73.88 mg/m³, DNEL 263 mg/m³, RCR 0.28
Worker - dermal, long-term - systemic: Exposure 5.49 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.07

PROC11 Non industrial spraying
Worker - inhalation, long-term - systemic: Exposure 59.1 mg/m³, DNEL 263 mg/m³, RCR 0.22
Worker - dermal, long-term - systemic: Exposure 5.36 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.06

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

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

Identification

Product name	1-Propoxy-2-propanol
REACH registration number	01-2119474443-37-XXXX
CAS number	1569-01-3
EC number	216-372-4
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. Title of exposure scenario

Main title	Use in Cleaning Agents, Consumer
Product category	PC35 Washing and cleaning products
Main sector	SU21 Consumer uses

Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor) ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
SPERC	ESVOC SPERC 8.4c.v1

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

Frequency and duration of use

Emission days: 365 days/year

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100
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Risk management measures

STP type	Municipal STP.
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 87.4%

Conditions and measures related to external treatment of waste for disposal

Disposal method	Dispose of waste product or used containers according to local regulations
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Use in Cleaning Agents, Consumer

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

Product characteristics

Concentration details Concentration of substance in product: 5%

Amounts used

Amount per use: 16 g

Frequency and duration of use

Covers daily exposure up to 2hours

Other given operational conditions affecting Non-industrial exposure

No specific risk management measure identified beyond those operational conditions stated.

3. Exposure estimation (Environment 1)

Assessment method Used EUSES model.

Environmental exposure Fresh water: Exposure 0.00012 mg/l, PNEC 0.1 mg/l, RCR 0.0012
freshwater sediment: Exposure 0.00048 mg/kg, PNEC 0.386 mg/kg, RCR 0.0012
Marine water: Exposure 0.000017 mg/l, PNEC 0.01 mg/l, RCR 0.0017
marine sediment: Exposure 0.000065 mg/kg, PNEC 0.0386 mg/kg, RCR 0.0017
Soil: Exposure 0.000065 mg/kg, PNEC 0.0185 mg/kg, RCR 0.0035

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC

3. Exposure estimation (Health 1)

factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).

Assessment method The ECETOC TRA tool has been used to estimate consumer exposures, unless otherwise indicated.

Exposure Consumer - inhalation, long-term - systemic: Exposure 0.45 mg/m³, DNEL 38 mg/m³, RCR 0.01
Consumer - dermal, long-term - systemic: Exposure 0.15 mg/kg/day, DNEL 36 mg/kg/day, RCR 0.004

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

Estimated workplace exposures are not expected to exceed DNELs when the identified risk management measures are adopted.

Exposure scenario Lubricants, Professional

Identification

Product name	1-Propoxy-2-propanol
REACH registration number	01-2119474443-37-XXXX
CAS number	1569-01-3
EC number	216-372-4
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. Title of exposure scenario

Main title	Lubricants, Professional
Main sector	SU22 Professional uses

Environment

Environmental release category	ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)
SPERC	ESVOC SPERC 9.6b.v1

Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing) PROC10 Roller application or brushing PROC11 Non industrial spraying PROC13 Treatment of articles by dipping and pouring. PROC17 Lubrication at high energy conditions in metal working operations PROC18 General greasing/lubrication at high kinetic energy conditions PROC20 Use of functional fluids in small devices
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Lubricants, Professional

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

Amounts used

Daily amount per site: 0.00014 kg

Frequency and duration of use

Emission days: 300 days/year

Continuous release.

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Risk management measures

STP details Estimated substance removal from wastewater via domestic sewage treatment: 87.4%
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant)
RMMs: 87.4%

Conditions and measures related to external treatment of waste for disposal

Waste treatment Incinerate, absorb or adsorb vapours stripped from solution whenever necessary. Dispose of waste product or used containers in accordance with local regulations

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

Product characteristics

Physical state Liquid, vapour pressure < 0.5 kPa at STP

Concentration details Covers concentrations up to 25 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Setting Indoor/outdoor use.

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

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.
PROC11 Non industrial spraying Ensure operation is undertaken outdoors. , or: Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).
PROC17 Lubrication at high energy conditions in metal working operations Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings. , or: Ensure operation is undertaken outdoors.
PROC18 General greasing/lubrication at high kinetic energy conditions Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour).

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.
PROC11 Non industrial spraying Avoid carrying out operation for more than 1 hour.

Risk management measures

Lubricants, Professional

Use suitable eye protection.

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC10 Roller application or brushing

PROC13 Treatment of articles by dipping and pouring.

PROC18 General greasing/lubrication at high kinetic energy conditions

Wear suitable gloves tested to EN374.

Wear chemically-resistant gloves (tested to EN374) in combination with specific activity training.

PROC17 Lubrication at high energy conditions in metal working operations

Wear chemically-resistant gloves (tested to EN374) in combination with 'basic' employee training.

PROC11 Non industrial spraying

Wear chemically-resistant gloves (tested to EN374) in combination with specific activity training.

3. Exposure estimation (Environment 1)

Assessment method	Used EUSES model.
Environmental exposure	Fresh water: Exposure 0.00012 mg/l, PNEC 0.1 mg/l, RCR 0.0012 freshwater sediment: Exposure 0.00047 mg/kg, PNEC 0.386 mg/kg, RCR 0.0012 Marine water: Exposure 0.000017 mg/l, PNEC 0.01 mg/l, RCR 0.0017 marine sediment: Exposure 0.000064 mg/kg, PNEC 0.0386 mg/kg, RCR 0.0017 Soil: Exposure 0.000065 mg/kg, PNEC 0.0185 mg/kg, RCR 0.0035

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC

3. Exposure estimation (Health 1)

factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).

Assessment method	ECETOC TRA v2.0 Worker
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Lubricants, Professional

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
 Worker - inhalation, long-term - systemic: Exposure 0.03 mg/m³, DNEL 263 mg/m³, RCR 0.0001
 Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.004

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
 Worker - inhalation, long-term - systemic: Exposure 14.78 mg/m³, DNEL 263 mg/m³, RCR 0.06
 Worker - dermal, long-term - systemic: Exposure 1.37 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.02

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
 Worker - inhalation, long-term - systemic: Exposure 8.87 mg/m³, DNEL 263 mg/m³, RCR 0.03
 Worker - dermal, long-term - systemic: Exposure 0.34 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.004

PROC4 Chemical production where opportunity for exposure arises
 Worker - inhalation, long-term - systemic: Exposure 14.78 mg/m³, DNEL 263 mg/m³, RCR 0.06
 Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.08

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
 Worker - inhalation, long-term - systemic: Exposure 73.88 mg/m³, DNEL 263 mg/m³, RCR 0.28
 Worker - dermal, long-term - systemic: Exposure 2.74 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.03

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
 Elevated temperature
 Worker - inhalation, long-term - systemic: Exposure 124.11 mg/m³, DNEL 263 mg/m³, RCR 0.47
 Worker - dermal, long-term - systemic: Exposure 2.74 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.03

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
 Worker - inhalation, long-term - systemic: Exposure 29.55 mg/m³, DNEL 263 mg/m³, RCR 0.11
 Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.08

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
 Elevated temperature
 Worker - inhalation, long-term - systemic: Exposure 147.75 mg/m³, DNEL 263 mg/m³, RCR 0.56
 Worker - dermal, long-term - systemic: Exposure 1.37 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.02

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)
 Worker - inhalation, long-term - systemic: Exposure 14.78 mg/m³, DNEL 263 mg/m³, RCR 0.06
 Worker - dermal, long-term - systemic: Exposure 6.86 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.08

PROC10 Roller application or brushing
 Worker - inhalation, long-term - systemic: Exposure 73.88 mg/m³, DNEL 263 mg/m³, RCR 0.28

Lubricants, Professional

Worker - dermal, long-term - systemic: Exposure 5.49 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.07

PROC11 Non industrial spraying

Worker - inhalation, long-term - systemic: Exposure 41.37 mg/m³, DNEL 263 mg/m³, RCR 0.16

Worker - dermal, long-term - systemic: Exposure 5.36 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.06

PROC13 Treatment of articles by dipping and pouring.

Worker - inhalation, long-term - systemic: Exposure 29.55 mg/m³, DNEL 263 mg/m³, RCR 0.11

Worker - dermal, long-term - systemic: Exposure 2.74 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.03

PROC17 Lubrication at high energy conditions in metal working operations
Indoor.

Worker - inhalation, long-term - systemic: Exposure 14.78 mg/m³, DNEL 263 mg/m³, RCR 0.06

Worker - dermal, long-term - systemic: Exposure 1.37 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.02

PROC17 Lubrication at high energy conditions in metal working operations
Outdoor.

Worker - inhalation, long-term - systemic: Exposure 103.43 mg/m³, DNEL 263 mg/m³, RCR 0.39

Worker - dermal, long-term - systemic: Exposure 21.00 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.08

PROC18 General greasing/lubrication at high kinetic energy conditions

Worker - inhalation, long-term - systemic: Exposure 103.43 mg/m³, DNEL 263 mg/m³, RCR 0.39

Worker - dermal, long-term - systemic: Exposure 2.74 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.03

PROC20 Use of functional fluids in small devices

Worker - inhalation, long-term - systemic: Exposure 14.78 mg/m³, DNEL 263 mg/m³, RCR 0.06

Worker - dermal, long-term - systemic: Exposure 1.71 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.02

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

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

Identification

Product name	1-Propoxy-2-propanol
REACH registration number	01-2119474443-37-XXXX
CAS number	1569-01-3
EC number	216-372-4
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. Title of exposure scenario

Main title	Use in Cleaning Agents, Industrial
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)
SPERC	ESVOC SPERC 4.4a.v1

Worker

Process category	PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition PROC4 Chemical production where opportunity for exposure arises PROC7 Industrial spraying PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities PROC10 Roller application or brushing PROC13 Treatment of articles by dipping and pouring.
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2. Conditions of use affecting exposure (Industrial - Environment 1)

Amounts used

Daily amount per site: 5000 kg

Use in Cleaning Agents, Industrial

Frequency and duration of use

Emission days: 20 days/year
Continuous release.

Environmental factors not influenced by risk management measures

Dilution Local freshwater dilution factor: 10
Local marine water dilution factor: 100

Risk management measures

Good practice Site should have a spill plan to ensure that adequate safeguards are in place to minimise the impact of episodic releases.

STP details Estimated substance removal from wastewater via domestic sewage treatment: 87.4%
Total efficiency of removal from wastewater after onsite and offsite (domestic treatment plant)
RMMs: 87.4%

Conditions and measures related to external treatment of waste for disposal

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

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

Product characteristics

Physical state Liquid, vapour pressure < 0.5 kPa at STP

Concentration details Covers concentrations up to 20 %. Unless otherwise stated.

Frequency and duration of use

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

Other given operational conditions affecting workers exposure

Setting Indoor/outdoor use.

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

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.

Organisational measures to prevent/limit releases, dispersion and exposure

Organisational measures Assumes a good basic standard of occupational hygiene is implemented.
PROC10 Roller application or brushing Cleaning with low-pressure washers Avoid carrying out operation for more than 4 hours.

Risk management measures

Use suitable eye protection.
PROC7 Industrial spraying
Wear a respirator conforming to EN140 with Type A filter or better.

3. Exposure estimation (Environment 1)

Assessment method Used EUSES model.

Environmental exposure Fresh water: Exposure 0.0033 mg/l, PNEC 0.1 mg/l, RCR 0.033
freshwater sediment: Exposure 0.013 mg/kg, PNEC 0.386 mg/kg, RCR 0.033
Marine water: Exposure 0.00033 mg/l, PNEC 0.01 mg/l, RCR 0.033
marine sediment: Exposure 0.0013 mg/kg, PNEC 0.0386 mg/kg, RCR 0.033
Soil: Exposure 0.0028 mg/kg, PNEC 0.0185 mg/kg, RCR 0.15

Use in Cleaning Agents, Industrial

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).

3. Exposure estimation (Health 1)

Assessment method	ECETOC TRA v2.0 Worker
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Use in Cleaning Agents, Industrial

Exposure

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions
Worker - inhalation, long-term - systemic: Exposure 0.03 mg/m³, DNEL 263 mg/m³, RCR 0.0001
Worker - dermal, long-term - systemic: Exposure 0.02 mg/kg/day, DNEL 82.5 mg/kg/day, RCR <0.01

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions
Worker - inhalation, long-term - systemic: Exposure 2.95 mg/m³, DNEL 263 mg/m³, RCR 0.01
Worker - dermal, long-term - systemic: Exposure 0.82 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.01

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition
Worker - inhalation, long-term - systemic: Exposure 8.86 mg/m³, DNEL 263 mg/m³, RCR 0.03
Worker - dermal, long-term - systemic: Exposure 0.41 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.01

PROC4 Chemical production where opportunity for exposure arises
Elevated temperature
Worker - inhalation, long-term - systemic: Exposure 59.09 mg/m³, DNEL 263 mg/m³, RCR 0.22
Worker - dermal, long-term - systemic: Exposure 4.12 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.05

PROC4 Chemical production where opportunity for exposure arises
Worker - inhalation, long-term - systemic: Exposure 14.77 mg/m³, DNEL 263 mg/m³, RCR 0.06
Worker - dermal, long-term - systemic: Exposure 4.12 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.05

PROC7 Industrial spraying
Worker - inhalation, long-term - systemic: Exposure 29.54 mg/m³, DNEL 263 mg/m³, RCR 0.11
Worker - dermal, long-term - systemic: Exposure 25.72 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.31

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities
Worker - inhalation, long-term - systemic: Exposure 29.54 mg/m³, DNEL 263 mg/m³, RCR 0.11
Worker - dermal, long-term - systemic: Exposure 8.23 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.10

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities
Worker - inhalation, long-term - systemic: Exposure 14.77 mg/m³, DNEL 263 mg/m³, RCR 0.06
Worker - dermal, long-term - systemic: Exposure 8.23 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.10

PROC10 Roller application or brushing
Surface cleaning
Worker - inhalation, long-term - systemic: Exposure 29.54 mg/m³, DNEL 263 mg/m³, RCR 0.11
Worker - dermal, long-term - systemic: Exposure 16.46 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.20

PROC10 Roller application or brushing
Cleaning with low-pressure washers
Worker - inhalation, long-term - systemic: Exposure 17.73 mg/m³, DNEL 263 mg/m³, RCR 0.07
Worker - dermal, long-term - systemic: Exposure 16.46 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.20

Use in Cleaning Agents, Industrial

PROC13 Treatment of articles by dipping and pouring.

Worker - inhalation, long-term - systemic: Exposure 29.54 mg/m³, DNEL 263 mg/m³, RCR 0.11

Worker - dermal, long-term - systemic: Exposure 8.23 mg/kg/day, DNEL 82.5 mg/kg/day, RCR 0.10

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

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

Identification

Product name	1-Propoxy-2-propanol
REACH registration number	01-2119474443-37-XXXX
CAS number	1569-01-3
EC number	216-372-4
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. Title of exposure scenario

Main title	Use in Cosmetics, Consumer
Product category	PC39 Cosmetics, personal care.
Main sector	SU21 Consumer uses

Environment

Environmental release category	ERC8a Widespread use of non-reactive processing aid (no inclusion into or onto article, indoor)
SPERC	ESVOC SPERC 8.16.v1

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

Amounts used

Daily amount per site: 0.0015 kg

Frequency and duration of use

Emission days: 300 days/year

Environmental factors not influenced by risk management measures

Dilution	Local freshwater dilution factor: 10 Local marine water dilution factor: 100
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Risk management measures

STP type	Municipal STP.
STP details	Estimated substance removal from wastewater via domestic sewage treatment: 87.4%

Conditions and measures related to external treatment of waste for disposal

Use in Cosmetics, Consumer

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

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

Control of Non-industrial exposure

In accordance to the Article 14 (5b) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation for human health does not need to be performed for end uses in cosmetic products within the scope of Directive 76/768/EEC.

3. Exposure estimation (Environment 1)

Assessment method Used EUSES model.

Environmental exposure Fresh water: Exposure 0.00012 mg/l, PNEC 0.1 mg/l, RCR 0.0012
freshwater sediment: Exposure 0.00047 mg/kg, PNEC 0.386 mg/kg, RCR 0.0012
Marine water: Exposure 0.000017 mg/l, PNEC 0.01 mg/l, RCR 0.0017
marine sediment: Exposure 0.000065 mg/kg, PNEC 0.0386 mg/kg, RCR 0.0017
Soil: Exposure 0.000065 mg/kg, PNEC 0.0185 mg/kg, RCR 0.0035

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

Guidance is based on assumed operating conditions which may not be applicable to all sites, thus, scaling may be necessary to define appropriate site-specific risk management measures. Further details on scaling and control technologies are provided in SpERC factsheet (<http://cefic.org/en/reach-for-industries-libraries.html>).