

Creation Date 20-Apr-2010

Revision Date 13-Mar-2025

Revision Number 1

## Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

### 1.1. Product identifier

<b>Product Description:</b>	<b><u>Propylene oxide</u></b>
<b>Cat No. :</b>	<b>S60488</b>
<b>Synonyms</b>	1,2-Epoxypropane; Methyloxirane
<b>Index No</b>	603-055-00-4
<b>CAS No</b>	75-56-9
<b>EC No</b>	200-879-2
<b>Molecular Formula</b>	C3 H6 O

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

<b>Recommended Use</b>	Laboratory chemicals.
<b>Uses advised against</b>	No Information available

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

#### Company

Thermo Fisher (Kandel) GmbH  
Erlenbachweg 2, 76870 Kandel, Germany  
Tel: +49 (0) 721 84007 280  
Fax: +49 (0) 721 84007 300

**Swiss distributor** - Fisher Scientific AG  
Neuhofstrasse 11, CH 4153 Reinach  
Tel: +41 (0) 56 618 41 11  
<https://www.fishersci.ch/ch/en/customer-help-support/forms/email-us.html>

**E-mail address** begel.sdsdesk@thermofisher.com

### 1.4. Emergency telephone number

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11  
Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99  
**CHEMTREC** Tel. No.**US**:001-800-424-9300 / **Europe**:001-703-527-3887

customers in Switzerland:  
Tox Info Suisse Emergency Number: **145 (24hr)**  
Tox Info Suisse: +41-44 251 51 51 (Emergency number from abroad)  
Chemtrec (24h) Toll-Free: 0800 564 402  
Chemtrec Local: +41-43 508 20 11 (Zurich)

## Section 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

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## CLP Classification - Regulation (EC) No 1272/2008

### Physical hazards

Flammable liquids

Category 1 (H224)

### Health hazards

Acute oral toxicity

Category 4 (H302)

Acute dermal toxicity

Category 3 (H311)

Acute Inhalation Toxicity - Vapors

Category 3 (H331)

Serious Eye Damage/Eye Irritation

Category 2 (H319)

Germ Cell Mutagenicity

Category 1B (H340)

Carcinogenicity

Category 1B (H350)

Specific target organ toxicity - (single exposure)

Category 3 (H335)

### Environmental hazards

Based on available data, the classification criteria are not met

Full text of Hazard Statements: see section 16

## 2.2. Label elements



Signal Word

Danger

### Hazard Statements

H224 - Extremely flammable liquid and vapor

H302 - Harmful if swallowed

H319 - Causes serious eye irritation

H335 - May cause respiratory irritation

H340 - May cause genetic defects

H350 - May cause cancer

H311 + H331 - Toxic in contact with skin or if inhaled

### Precautionary Statements

P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting

P264 - Wash face, hands and any exposed skin thoroughly after handling

P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing

P311 - Call a POISON CENTER or doctor/physician

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

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

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

### Additional EU labelling

Restricted to professional users

## 2.3. Other hazards

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Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)

Hazardous polymerization may occur

Toxic to terrestrial vertebrates

This product does not contain any known or suspected endocrine disruptors

## Section 3: Composition/information on ingredients

### 3.1. Substances

Component	CAS No	EC No	Weight %	CLP Classification - Regulation (EC) No 1272/2008
Propylene oxide	75-56-9	EEC No. 200-879-2	>95	Flam. Liq. 1 (H224) Acute Tox. 4 (H302) Acute Tox. 3 (H311) Acute Tox. 3 (H331) Eye Irrit. 2 (H319) STOT SE 3 (H335) Muta. 1B (H340) Carc. 1B (H350)

Full text of Hazard Statements: see section 16

## Section 4: First aid measures

### 4.1. Description of first aid measures

<b>General Advice</b>	Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
<b>Eye Contact</b>	In the case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. Immediate medical attention is required.
<b>Ingestion</b>	Do NOT induce vomiting. Call a physician or poison control center immediately.
<b>Inhalation</b>	Remove to fresh air. If not breathing, give artificial respiration. Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Immediate medical attention is required.
<b>Self-Protection of the First Aider</b>	Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

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

. Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

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

<b>Notes to Physician</b>	Treat symptomatically. Symptoms may be delayed.
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## Section 5: Firefighting measures

### 5.1. Extinguishing media

#### **Suitable Extinguishing Media**

Water spray, carbon dioxide (CO<sub>2</sub>), dry chemical, alcohol-resistant foam. Water mist may be used to cool closed containers.

#### **Extinguishing media which must not be used for safety reasons**

No information available.

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

Extremely flammable. Containers may explode when heated. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back.

#### **Hazardous Combustion Products**

Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>).

### 5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

## Section 6: ACCIDENTAL RELEASE MEASURES

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

Use personal protective equipment as required. Ensure adequate ventilation. Remove all sources of ignition. Take precautionary measures against static discharges. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas.

### 6.2. Environmental precautions

Should not be released into the environment.

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

Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment.

### 6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

## Section 7: Handling and storage

### 7.1. Precautions for safe handling

Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Use only under a chemical fume hood. Do not breathe mist/vapors/spray. Do not ingest. If swallowed then seek immediate medical assistance. Keep away from open flames, hot surfaces and sources of ignition. Use spark-proof tools and explosion-proof equipment. Use only non-sparking tools. To avoid ignition of vapors by static electricity discharge, all metal parts of the equipment must be grounded. Take precautionary measures against static discharges.

#### **Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do

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not eat, drink or smoke when using this product. Remove and wash contaminated clothing and gloves, including the inside, before re-use. Wash hands before breaks and after work.

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

Keep containers tightly closed in a dry, cool and well-ventilated place. Flammables area. Keep away from heat, sparks and flame.

**Technical Rules for Hazardous Substances (TRGS) 510**  
**Storage Class (LGK) (Germany)**

Class 3

**Switzerland - Storage of hazardous substances**

Storage class - SC 3  
<https://www.kvu.ch/de/themen/stoffe-und-produkte>  
<https://www.kvu.ch/fr/themes/substances-et-produits>  
<https://www.kvu.ch/it/temi/sostanze-e-prodotti>

## 7.3. Specific end use(s)

Use in laboratories

## Section 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Exposure limits

List source(s): **UK** - EH40/2005 Work Exposure Limits, Forth edition. Published 2020. **IRE** - 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority. **CH** - The Government of Switzerland has set a directive on limit values for working materials (Grenzwerte am Arbeitsplatz) which is based on the Swiss Federal Regulation "Verordnung über die Verhütung von Unfällen und Berufskrankheiten". This directive is administered, periodically revised and enforced by SUVA (Swiss National Accident Insurance Fund). **EU** - Commission Directive (EU) 2019/1831 of 24 October 2019 establishing a fifth list of indicative occupational exposure limit values pursuant to Council Directive 98/24/EC and amending Commission Directive 2000/39/EC

Component	European Union	The United Kingdom	France	Belgium	Spain
Propylene oxide	TWA: 2.4 mg/m <sup>3</sup> (8h) TWA: 1 ppm (8h)	STEL: 3 ppm 15 min STEL: 7.2 mg/m <sup>3</sup> 15 min TWA: 1 ppm 8 hr TWA: 2.4 mg/m <sup>3</sup> 8 hr Carc.	TWA / VME: 1 ppm (8 heures). restrictive limit TWA / VME: 2.4 mg/m <sup>3</sup> (8 heures). restrictive limit	TWA: 1 ppm 8 uren TWA: 2.4 mg/m <sup>3</sup> 8 uren	TWA / VLA-ED: 1 ppm (8 horas) TWA / VLA-ED: 2.4 mg/m <sup>3</sup> (8 horas)

Component	Italy	Germany	Portugal	The Netherlands	Finland
Propylene oxide	TWA: 2.4 mg/m <sup>3</sup> 8 ore. Time Weighted Average TWA: 1 ppm 8 ore. Time Weighted Average	TWA: 1 ppm (8 Stunden). AGW - exposure factor 4 TWA: 2.4 mg/m <sup>3</sup> (8 Stunden). AGW - exposure factor 4 TWA: 2 ppm (8 Stunden). MAK TWA: 4.8 mg/m <sup>3</sup> (8 Stunden). MAK Höhepunkt: 4 ppm Höhepunkt: 9.6 mg/m <sup>3</sup>	TWA: 1 ppm 8 horas TWA: 2.4 mg/m <sup>3</sup> 8 horas	TWA: 1 ppm 8 uren TWA: 2.4 mg/m <sup>3</sup> 8 uren	TWA: 1 ppm 8 tunteina TWA: 2.4 mg/m <sup>3</sup> 8 tunteina Iho

Component	Austria	Denmark	Switzerland	Poland	Norway
Propylene oxide	MAK-KZGW: 4 ppm 15 Minuten MAK-KZGW: 8 mg/m <sup>3</sup> 15 Minuten MAK-TMW: 1 ppm 8 Stunden MAK-TMW: 2.4 mg/m <sup>3</sup> 8 Stunden	TWA: 1 ppm 8 timer TWA: 2.4 mg/m <sup>3</sup> 8 timer STEL: 2 ppm 15 minutter STEL: 4.8 mg/m <sup>3</sup> 15 minutter Hud	TWA: 2.5 ppm 8 Stunden TWA: 6 mg/m <sup>3</sup> 8 Stunden	TWA: 2.4 mg/m <sup>3</sup> 8 godzinach	TWA: 1 ppm 8 timer TWA: 2 mg/m <sup>3</sup> 8 timer STEL: 3 ppm 15 minutter. value calculated STEL: 4 mg/m <sup>3</sup> 15 minutter. value calculated Hud

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Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
Propylene oxide	TWA: 2.4 mg/m <sup>3</sup> TWA: 1 ppm	TWA-GVI: 1 ppm 8 satima. TWA-GVI: 2.4 mg/m <sup>3</sup> 8 satima.	TWA: 1 ppm 8 hr. TWA: 2.4 mg/m <sup>3</sup> 8 hr. STEL: 3 ppm 15 min STEL: 7.2 mg/m <sup>3</sup> 15 min	TWA: 1 ppm TWA: 2.4 mg/m <sup>3</sup>	TWA: 2.4 mg/m <sup>3</sup> 8 hodinách. Ceiling: 5 mg/m <sup>3</sup>

Component	Estonia	Gibraltar	Greece	Hungary	Iceland
Propylene oxide	TWA: 1 ppm 8 tundides. TWA: 2.4 mg/m <sup>3</sup> 8 tundides. STEL: 10 ppm 15 minutites. STEL: 25 mg/m <sup>3</sup> 15 minutites.		TWA: 1 ppm TWA: 2.4 mg/m <sup>3</sup>	TWA: 2.4 mg/m <sup>3</sup> 8 órában. AK TWA: 1 ppm 8 órában. AK lehetséges borön keresztül felszívódás	TWA: 1.0 ppm 8 klukkustundum. TWA: 2.4 mg/m <sup>3</sup> 8 klukkustundum. Skin notation Ceiling: 2 ppm Ceiling: 4.8 mg/m <sup>3</sup>

Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Propylene oxide	TWA: 1 ppm TWA: 2.4 mg/m <sup>3</sup>	TWA: 1 ppm IPRD TWA: 2.4 mg/m <sup>3</sup> IPRD			TWA: 1 ppm 8 ore TWA: 2.4 mg/m <sup>3</sup> 8 ore

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Propylene oxide	Skin notation MAC: 1 mg/m <sup>3</sup>	TWA: 2.5 ppm 8 hodinách TWA: 6 mg/m <sup>3</sup> 8 hodinách Potential for cutaneous absorption STEL: 12.5 ppm 15 minútach STEL: 30 mg/m <sup>3</sup> 15 minútach	TWA: 1 ppm 8 urah TWA: 2.4 mg/m <sup>3</sup> 8 urah	Binding STEL: 5 ppm 15 minuter Binding STEL: 12,5 mg/m <sup>3</sup> 15 minuter TLV: 1 ppm 8 timmar. NGV TLV: 2.4 mg/m <sup>3</sup> 8 timmar. NGV	

## Biological limit values

List source(s):

Component	European Union	United Kingdom	France	Spain	Germany
Propylene oxide					N-(2-Hydroxypropyl)valine: 2500 pmol/g Globin erythrocytes (after at least 3 months exposure)

## Monitoring methods

BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS70 General methods for sampling airborne gases and vapours

MDHS 88 Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas chromatography

MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography

## Derived No Effect Level (DNEL) / Derived Minimum Effect Level (DMEL)

See table for values

Component	Acute effects local (Inhalation)	Acute effects systemic (Inhalation)	Chronic effects local (Inhalation)	Chronic effects systemic (Inhalation)
Propylene oxide 75-56-9 (>95)	DNEL = 170mg/m <sup>3</sup>		DNEL = 2.4mg/m <sup>3</sup>	

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## Predicted No Effect Concentration (PNEC)

See values below.

Component	Fresh water	Fresh water sediment	Water Intermittent	Microorganisms in sewage treatment	Soil (Agriculture)
Propylene oxide 75-56-9 ( >95 )	PNEC = 0.052mg/L	PNEC = 0.245mg/kg sediment dw	PNEC = 0.52mg/L	PNEC = 10mg/L	PNEC = 0.0186mg/kg soil dw

Component	Marine water	Marine water sediment	Marine water Intermittent	Food chain	Air
Propylene oxide 75-56-9 ( >95 )	PNEC = 0.0052mg/L	PNEC = 0.0245mg/kg sediment dw			

## 8.2. Exposure controls

### Engineering Measures

Use only under a chemical fume hood. Ensure that eyewash stations and safety showers are close to the workstation location. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure adequate ventilation, especially in confined areas.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

### Personal protective equipment

#### Eye Protection

Goggles (European standard - EN 166)

#### Hand Protection

Protective gloves

Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
Neoprene gloves	< 30 minutes	0.6 mm	EN 374	(minimum requirement)
PVA	< 35 minutes	0.3 mm		
Laminated film (Barrier)	> 480 minutes	0.06 mm		

#### Skin and body protection

Long sleeved clothing.

Inspect gloves before use. observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information) gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion. gloves with care avoiding skin contamination.

#### Respiratory Protection

When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.  
To protect the wearer, respiratory protective equipment must be the correct fit and be used and maintained properly

#### Large scale/emergency use

Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced  
**Recommended Filter type:** low boiling organic solvent Type AX Brown conforming to EN371

#### Small scale/Laboratory use

Use a NIOSH/MSHA or European Standard EN 149:2001 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.  
**Recommended half mask:-** Valve filtering: EN405; or; Half mask: EN140; plus filter, EN 141  
When RPE is used a face piece Fit Test should be conducted

#### Environmental exposure controls

No information available.

## Section 9: Physical and chemical properties

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## 9.1. Information on basic physical and chemical properties

Physical State	Liquid	
Appearance	Colorless	
Odor	aromatic	
Odor Threshold	No data available	
Melting Point/Range	-112 °C / -169.6 °F	
Softening Point	No data available	
Boiling Point/Range	34 °C / 93.2 °F	
Flammability (liquid)	Extremely flammable	On basis of test data
Flammability (solid,gas)	Not applicable	Liquid
Explosion Limits	<b>Lower</b> 1.9 Vol% <b>Upper</b> 45 Vol%	
Flash Point	-37 °C / -34.6 °F	<b>Method -</b> No information available
Autoignition Temperature	430 °C / 806 °F	
Decomposition Temperature	No data available	
pH	No information available	
Viscosity	0.32 mPa s at 20 °C	
Water Solubility	40g/100ml (20°C)	
Solubility in other solvents	No information available	
Partition Coefficient (n-octanol/water)		
Component	<b>log Pow</b>	
Propylene oxide	<1	
Vapor Pressure	590 mbar @ 20 °C	
Density / Specific Gravity	0.830	
Bulk Density	Not applicable	Liquid
Vapor Density	2.0	(Air = 1.0)
Particle characteristics	Not applicable (liquid)	

## 9.2. Other information

Molecular Formula	C3 H6 O
Molecular Weight	58.08
Explosive Properties	Vapors may form explosive mixtures with air
Evaporation Rate	No information available

## Section 10: Stability and reactivity

### 10.1. Reactivity

Yes

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

Hazardous Polymerization	Hazardous polymerization may occur.
Hazardous Reactions	None under normal processing.

### 10.4. Conditions to avoid

Incompatible products. Excess heat. Keep away from open flames, hot surfaces and sources of ignition.

### 10.5. Incompatible materials

Strong oxidizing agents. Acids. Bases. Amines. copper. Copper alloys. Peroxides.



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## 10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

## Section 11: Toxicological information

### 11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

#### Product Information

##### (a) acute toxicity;

Oral	Category 4
Dermal	Category 3
Inhalation	Category 3

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Propylene oxide	LD50 = 520 mg/kg ( Rat )	LD50 = 1244 mg/kg ( Rabbit )	9.48 mg/L ( Rat ) 4 h

(b) skin corrosion/irritation; No data available

(c) serious eye damage/irritation; Category 2

##### (d) respiratory or skin sensitization;

Respiratory	No data available
Skin	No data available

(e) germ cell mutagenicity; Category 1B  
May cause heritable genetic damage

(f) carcinogenicity; Category 1B  
May cause cancer. The table below indicates whether each agency has listed any ingredient as a carcinogen

Component	EU	UK	Germany	IARC
Propylene oxide	Carc Cat. 1B			Group 2B

(g) reproductive toxicity; No data available

(h) STOT-single exposure; Category 3  
Results / Target organs Respiratory system.

(i) STOT-repeated exposure; No data available  
Target Organs No information available.

(j) aspiration hazard; No data available

Symptoms / effects, both acute and delayed Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

### 11.2. Information on other hazards

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**Endocrine Disrupting Properties** Assess endocrine disrupting properties for human health. This product does not contain any known or suspected endocrine disruptors.

## Section 12: Ecological information

### 12.1. Toxicity

**Ecotoxicity effects** Do not empty into drains. .

Component	Freshwater Fish	Water Flea	Freshwater Algae
Propylene oxide	LC50: = 215 mg/L, 96h static (Lepomis macrochirus)	EC50: = 350 mg/L, 48h (Daphnia magna)	EC50: = 240 mg/L, 96h (Pseudokirchneriella subcapitata)

Component	Microtox	M-Factor
Propylene oxide	EC50 = 3300 mg/L 160 min	

### 12.2. Persistence and degradability

#### Persistence

Not readily biodegradable  
Persistence is unlikely, based on information available.

### 12.3. Bioaccumulative potential

Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Propylene oxide	<1	No data available

### 12.4. Mobility in soil

The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces. Will likely be mobile in the environment due to its volatility. Disperses rapidly in air.

### 12.5. Results of PBT and vPvB assessment

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB).

### 12.6. Endocrine disrupting properties

#### Endocrine Disruptor Information

This product does not contain any known or suspected endocrine disruptors

### 12.7. Other adverse effects

#### Persistent Organic Pollutant Ozone Depletion Potential

This product does not contain any known or suspected substance  
This product does not contain any known or suspected substance

## Section 13: Disposal considerations

### 13.1. Waste treatment methods

#### Waste from Residues/Unused Products

Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.

#### Contaminated Packaging

Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.

#### European Waste Catalogue (EWC)

According to the European Waste Catalog, Waste Codes are not product specific, but application specific.

#### Other Information

Waste codes should be assigned by the user based on the application for which the product

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was used. Do not flush to sewer. Can be landfilled or incinerated, when in compliance with local regulations.

## Switzerland - Waste Ordinance

Disposal should be in accordance with applicable regional, national and local laws and regulations. Ordinance on the Avoidance and the Disposal of Waste (Waste Ordinance, ADWO) SR 814.600  
<https://www.fedlex.admin.ch/eli/cc/2015/891/en>

## Section 14: Transport information

### IMDG/IMO

**14.1. UN number** UN1280  
**14.2. UN proper shipping name** PROPYLENE OXIDE  
**14.3. Transport hazard class(es)** 3  
**14.4. Packing group** I

### ADR

**14.1. UN number** UN1280  
**14.2. UN proper shipping name** PROPYLENE OXIDE  
**14.3. Transport hazard class(es)** 3  
**14.4. Packing group** I

### IATA

**14.1. UN number** UN1280  
**14.2. UN proper shipping name** PROPYLENE OXIDE  
**14.3. Transport hazard class(es)** 3  
**14.4. Packing group** I

**14.5. Environmental hazards** No hazards identified

**14.6. Special precautions for user** No special precautions required.

**14.7. Maritime transport in bulk according to IMO instruments** Not applicable, packaged goods

## Section 15: Regulatory information

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

#### International Inventories

Europe (EINECS/ELINCS/NLP), China (IECSC), Taiwan (TCSI), Korea (KECL), Japan (ENCS), Japan (ISHL), Canada (DSL/NDSL), Australia (AICS), New Zealand (NZIoC), Philippines (PICCS). US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

Component	CAS No	EINECS	ELINCS	NLP	IECSC	TCSI	KECL	ENCS	ISHL
Propylene oxide	75-56-9	200-879-2	-	-	X	X	KE-24565	X	X

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	DSL	NDSL	AICS	NZIoC	PICCS
Propylene oxide	75-56-9	X	ACTIVE	X	-	X	X	X

Legend: X - Listed '-' - Not Listed

KECL - NIER number or KE number (<http://ncis.nier.go.kr/en/main.do>)

### Authorisation/Restrictions according to EU REACH

ALFAAS60488

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Component	CAS No	REACH (1907/2006) - Annex XIV - Substances Subject to Authorization	REACH (1907/2006) - Annex XVII - Restrictions on Certain Dangerous Substances	REACH Regulation (EC 1907/2006) article 59 - Candidate List of Substances of Very High Concern (SVHC)
Propylene oxide	75-56-9	-	Use restricted. See entry 28. (see link for restriction details) Use restricted. See entry 29. (see link for restriction details) Use restricted. See entry 75. (see link for restriction details)	SVHC Candidate list - Carcinogenic (Article 57a) SVHC Candidate list - Mutagenic (Article 57b)

After the sunset date the use of this substance requires either an authorization or can only be used for exempted uses, e.g. use in scientific research and development which includes routine analytics or use as intermediate.

## REACH links

<https://echa.europa.eu/authorisation-list>

<https://echa.europa.eu/substances-restricted-under-reach>

<https://echa.europa.eu/candidate-list-table>

## Seveso III Directive (2012/18/EC)

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Propylene oxide	75-56-9	5 tonne	50 tonne

## Regulation (EC) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of dangerous chemicals

Not applicable

## Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)?

Not applicable

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 .

Take note of Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values

Take note of Dir 76/769/EEC relating to restrictions on the marketing and use of certain dangerous substances and preparations

## National Regulations

**UK** - Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment

## WGK Classification

See table for values

Component	Germany - Water Classification (AwSV)	Germany - TA-Luft Class
Propylene oxide	WGK3	Krebserzeugende Stoffe - Class III : 1 mg/m <sup>3</sup> (Massenkonzentration)

## Swiss Regulations

Article 4 para. 4 of the Ordinance on the protection of young people in the workplace (SR 822.115) and Article 1 lit. f of the EAER regulation on hazardous work and young people (SR 822.115.2).

Take note on Article 13 Maternity Ordinance (SR 822.111.52) with regards expectant and nursing mothers.

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## 15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has not been conducted

## Section 16: Other information

### Full text of H-Statements referred to under sections 2 and 3

H302 - Harmful if swallowed  
H311 - Toxic in contact with skin  
H331 - Toxic if inhaled  
H319 - Causes serious eye irritation  
H335 - May cause respiratory irritation  
H340 - May cause genetic defects  
H350 - May cause cancer  
H224 - Extremely flammable liquid and vapor

### Legend

**CAS** - Chemical Abstracts Service

**EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances

**PICCS** - Philippines Inventory of Chemicals and Chemical Substances

**IECSC** - Chinese Inventory of Existing Chemical Substances

**KECL** - Korean Existing and Evaluated Chemical Substances

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

**ENCS** - Japanese Existing and New Chemical Substances

**AICS** - Australian Inventory of Chemical Substances

**NZIoC** - New Zealand Inventory of Chemicals

**WEL** - Workplace Exposure Limit

**ACGIH** - American Conference of Governmental Industrial Hygienists

**DNEL** - Derived No Effect Level

**RPE** - Respiratory Protective Equipment

**LC50** - Lethal Concentration 50%

**NOEC** - No Observed Effect Concentration

**PBT** - Persistent, Bioaccumulative, Toxic

**TWA** - Time Weighted Average

**IARC** - International Agency for Research on Cancer  
Predicted No Effect Concentration (PNEC)

**LD50** - Lethal Dose 50%

**EC50** - Effective Concentration 50%

**POW** - Partition coefficient Octanol:Water

**vPvB** - very Persistent, very Bioaccumulative

**ADR** - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**IMO/IMDG** - International Maritime Organization/International Maritime Dangerous Goods Code

**OECD** - Organisation for Economic Co-operation and Development

**BCF** - Bioconcentration factor

### Key literature references and sources for data

<https://echa.europa.eu/information-on-chemicals>

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

**ICAO/IATA** - International Civil Aviation Organization/International Air Transport Association

**MARPOL** - International Convention for the Prevention of Pollution from Ships

**ATE** - Acute Toxicity Estimate

**VOC** - (volatile organic compound)

### Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Chemical incident response training.

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts.

### Prepared By

Health, Safety and Environmental Department

### Creation Date

20-Apr-2010

### Revision Date

13-Mar-2025

### Revision Summary

Initial Release.

**This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.**

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## **COMMISSION REGULATION (EU) 2020/878 amending Annex II to Regulation (EC) No 1907/2006**

**For Switzerland - Compiled in accordance with the technical provisions referred to in Annex 2, Number 3, Chemo (SR 813.11 - Ordinance on Protection against Dangerous Substances and Preparations).**

### **Disclaimer**

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**End of Safety Data Sheet**