

# 1-propanol

## Safety Data Sheet

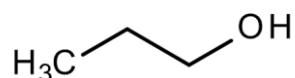
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### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Substance  
Substance name : 1-propanol  
EC Index-No. : 603-003-00-0  
EC-No. : 200-746-9  
CAS-No. : 71-23-8  
Type of product : Pure substance  
Formula : C3H8O  
Chemical structure :



Synonyms : 1-hydroxypropane / 1-propanol, anhydrous / alcohol C3 / ethyl carbinol / normal-propanol / normal-propyl alcohol / n-propanol / n-propanol (propyl alcohol, normal) / OPTAL / OS MOSOL / osmosol extra / propan-1-ol / propanol / propyl alcohol / propyl alcohol, normal / propylic alcohol

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

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Solvent  
Chemical raw material  
Chemical intermediate  
Laboratory chemical

##### 1.2.2. Uses advised against

No additional information available

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

ISOLAB Laborgeräte GmbH  
Am Dillhof 2 - 63863 Eschau / GERMANY  
Tel: + 49 93 74 / 978 55-0  
Fax: +49 93 74 / 978 55-29  
[prodsafe@isolab.de](mailto:prodsafe@isolab.de)

#### 1.4. Emergency telephone number

Country	Organisation/Company	Address	Emergency number	Comment
Germany	Giftnotruf der Charité CBF, Haus VIII (Wirtschaftsgebäude), UG	Hindenburgdamm 30 12203 Berlin	+49 30 19240	

### SECTION 2: Hazards identification

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

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flam. Liq. 2 H225  
Eye Dam. 1 H318  
STOT SE 3 H336

Full text of hazard classes and H-statements : see section 16

##### Adverse physicochemical, human health and environmental effects

No additional information available

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### 2.2. Label elements

#### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



Signal word (CLP) :

Danger

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapour  
H318 - Causes serious eye damage  
H336 - May cause drowsiness or dizziness

Precautionary statements (CLP) :

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
P240 - Ground/bond container and receiving equipment  
P280 - Wear eye protection, face protection  
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P313 - Get medical advice/ attention.  
P403 + P233 - Store in a well-ventilated place. Keep container tightly closed.

### 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name	Product identifier	%
1-propanol	(CAS-No.) 71-23-8 (EC-No.) 200-746-9 (EC Index-No.) 603-003-00-0	100

Full text of H-statements: see section 16

### 3.2. Mixtures

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general

: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital. Never give alcohol to drink.

First-aid measures after inhalation

: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.

First-aid measures after skin contact

: Rinse with water. Soap may be used. Take victim to a doctor if irritation persists.

First-aid measures after eye contact

: Rinse immediately with plenty of water for 15 minutes. Do not apply neutralizing agents. Take victim to an ophthalmologist.

First-aid measures after ingestion

: Rinse mouth with water. Do not induce vomiting. Call Poison Information Centre ([www.big.be/antigif.htm](http://www.big.be/antigif.htm)). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital. Doctor: gastric lavage.

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

Symptoms/effects after inhalation

: EXPOSURE TO HIGH CONCENTRATIONS: Central nervous system depression. Headache. Dizziness. Nausea. Vomiting. Coordination disorders. Mental confusion. Disturbances of consciousness.

Symptoms/effects after skin contact

: Slight irritation.

Symptoms/effects after eye contact

: Corrosion of the eye tissue. Inflammation/damage of the eye tissue.

Symptoms/effects after ingestion

: Gastrointestinal complaints. Abdominal pain. Risk of aspiration pneumonia. AFTER ABSORPTION OF HIGH QUANTITIES: Central nervous system depression. Symptoms similar to those listed under inhalation. FOLLOWING SYMPTOMS MAY APPEAR LATER: Decreased renal function.

Chronic symptoms

: ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Dry skin. Skin rash/inflammation.

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

No additional information available

## SECTION 5: Fire-fighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Water spray. Alcohol-resistant foam. Polymer foam. BC powder. Carbon dioxide.  
Unsuitable extinguishing media : Solid water jet ineffective as extinguishing medium.

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

Fire hazard : DIRECT FIRE HAZARD. Highly flammable. Gas/vapour flammable with air within explosion limits. INDIRECT FIRE HAZARD. May be ignited by sparks. Gas/vapour spreads at floor level: ignition hazard. Reactions involving a fire hazard: see "Reactivity Hazard".  
Explosion hazard : DIRECT EXPLOSION HAZARD. Gas/vapour explosive with air within explosion limits. INDIRECT EXPLOSION HAZARD. may be ignited by sparks. Reactions with explosion hazards: see "Reactivity Hazard".

### 5.3. Advice for firefighters

Firefighting instructions : Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat.

## SECTION 6: Accidental release measures

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

#### 6.1.1. For non-emergency personnel

Protective equipment : Gloves. Protective goggles. Protective clothing. See "Material-Handling" to select protective clothing.  
Emergency procedures : Keep upwind. Mark the danger area. Consider evacuation. Seal off low-lying areas. Close doors and windows of adjacent premises. Stop engines and no smoking. No naked flames or sparks. Spark- and explosionproof appliances and lighting equipment. Keep containers closed. Wash contaminated clothes.

#### 6.1.2. For emergency responders

No additional information available

### 6.2. Environmental precautions

Prevent spreading in sewers.

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

For containment : Contain released substance, pump into suitable containers. Consult "Material-handling" to select material of containers. Plug the leak, cut off the supply. Dam up the liquid spill. Try to reduce evaporation. Measure the concentration of the explosive gas-air mixture. Dilute/disperse combustible gas/vapour with water curtain. Dilute narcotic gases/vapours with water spray. Do not use compressed air for pumping over spills.  
Methods for cleaning up : Take up liquid spill into absorbent material, e.g.: dry sand/earth/vermiculite or powdered limestone. Scoop absorbed substance into closing containers. See "Material-handling" for suitable container materials. Carefully collect the spill/leftovers. Damaged/cooled tanks must be emptied. Do not use compressed air for pumping over spills. Clean contaminated surfaces with an excess of water. Take collected spill to manufacturer/competent authority. Wash clothing and equipment after handling.

### 6.4. Reference to other sections

No additional information available

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

Precautions for safe handling : Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Handle uncleaned empty containers as full ones. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Do not use compressed air for pumping over. Use spark-/explosionproof appliances and lighting system. Take precautions against electrostatic charges. Keep away from naked flames/heat. Keep away from ignition sources/sparks. Observe strict hygiene. Keep container tightly closed. Measure the concentration in the air regularly. Work under local exhaust/ventilation.

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

Heat and ignition sources : KEEP SUBSTANCE AWAY FROM: heat sources. ignition sources.  
Information on mixed storage : KEEP SUBSTANCE AWAY FROM: oxidizing agents. (strong) acids. highly flammable materials. halogens.

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Storage area	: Store in a cool area. Ventilation at floor level. Fireproof storeroom. Provide for a tub to collect spills. Under a shelter/in the open. Store only in a limited quantity. May be stored under nitrogen. May be stored under argon. Meet the legal requirements.
Special rules on packaging	: SPECIAL REQUIREMENTS: closing. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	: SUITABLE MATERIAL: steel. iron. copper. glass.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

1-propanol (71-23-8)		
Austria	Local name	n-Propanol
Austria	MAK (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
Austria	MAK (ppm)	200 ppm
Belgium	Local name	Alcool propylique # n-Propanol
Belgium	Limit value (mg/m <sup>3</sup> )	250 mg/m <sup>3</sup> (Alcool propylique; Belgium; Time-weighted average exposure limit 8 h)
Belgium	Limit value (ppm)	100 ppm (Alcool propylique; Belgium; Time-weighted average exposure limit 8 h)
Bulgaria	Local name	Пропилов алкохол
Bulgaria	OEL TWA (mg/m <sup>3</sup> )	300 mg/m <sup>3</sup>
Bulgaria	OEL STEL (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
Croatia	Local name	Propan-1-ol; (n-Propanol)
Croatia	GVI (granična vrijednost izloženosti) (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
Croatia	GVI (granična vrijednost izloženosti) (ppm)	200 ppm
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (mg/m <sup>3</sup> )	625 mg/m <sup>3</sup>
Croatia	KGVI (kratkotrajna granična vrijednost izloženosti) (ppm)	250 ppm
Croatia	Naznake (HR)	K (Skin): (naznaka da tvar može štetno djelovati kroz kožu); F (lako zapaljivo); Xi (nadražujuće)
Czech Republic	Local name	n-Propanol
Czech Republic	Expoziční limity (PEL) (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (PEL) (ppm)	204 ppm
Czech Republic	Expoziční limity (NPK-P) (mg/m <sup>3</sup> )	1000 mg/m <sup>3</sup>
Czech Republic	Expoziční limity (NPK-P) (ppm)	410 ppm
Czech Republic	Remark (CZ)	D
Denmark	Local name	1-Propanol (n-Propylalkohol)
Denmark	Grænseværdie (langvarig) (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
Denmark	Grænseværdie (langvarig) (ppm)	200 ppm
Denmark	Anmærkninger (DK)	H (betyder, at stoffet kan optages gennem huden)
Finland	Local name	1-Propanoli
Finland	HTP-arvo (8h) (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
Finland	HTP-arvo (8h) (ppm)	200 ppm
Finland	HTP-arvo (15 min)	620 mg/m <sup>3</sup>
Finland	HTP-arvo (15 min) (ppm)	250 ppm
France	Local name	Alcool n-propylique
France	VME (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup> (Alcool n-propylique; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
France	VME (ppm)	200 ppm (Alcool n-propylique; France; Time-weighted average exposure limit 8 h; VL: Valeur non réglementaire indicative)
France	Note (FR)	Valeurs recommandées/admises

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Greece	OEL TWA (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
Greece	OEL TWA (ppm)	200 ppm
Greece	OEL STEL (mg/m <sup>3</sup> )	625 mg/m <sup>3</sup>
Greece	OEL STEL (ppm)	250 ppm
Ireland	Local name	n-Propanol
Ireland	OEL (8 hours ref) (ppm)	100 ppm
Ireland	Notes (IE)	Sk
Latvia	Local name	Propilspirts(1-propanols)
Latvia	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Poland	Local name	Propan-1-ol (propylowy alkohol)
Poland	NDS (mg/m <sup>3</sup> )	200 mg/m <sup>3</sup>
Poland	NDSCh (mg/m <sup>3</sup> )	600 mg/m <sup>3</sup>
Portugal	Local name	n-Propanol (Álcool n-propilo)
Portugal	OEL TWA (ppm)	100 ppm
Romania	Local name	Alcool propilic
Romania	OEL TWA (mg/m <sup>3</sup> )	200 mg/m <sup>3</sup>
Romania	OEL TWA (ppm)	81 ppm
Romania	OEL STEL (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
Romania	OEL STEL (ppm)	203 ppm
Spain	Local name	n-Propanol (Alcohol n-propílico)
Spain	VLA-ED (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
Spain	VLA-ED (ppm)	200 ppm
Spain	VLA-EC (mg/m <sup>3</sup> )	1000 mg/m <sup>3</sup>
Spain	VLA-EC (ppm)	400 ppm
Spain	Notes	Vía dérmica (Indica que, en las exposiciones a esta sustancia, la aportación por la vía cutánea puede resultar significativa para el contenido corporal total si no se adoptan medidas para prevenir la absorción. En estas situaciones, es aconsejable la utilización del control biológico para poder cuantificar la cantidad global absorbida del contaminante. Para más información véase el Apartado 5 de este documento), s (Esta sustancia tiene prohibida total o parcialmente su comercialización y uso como fitosanitario y/o como biocida. Para una información detallada acerca de las prohibiciones consúltese: Base de datos de productos biocidas: <a href="http://www.msssi.gob.es/ciudadanos/productos.do?tip o=plaguicidas">http://www.msssi.gob.es/ciudadanos/productos.do?tip o=plaguicidas</a> Base de datos de productos fitosanitarios <a href="http://www.magrama.gob.es/agricultura/pags/fitos/regi stro/fichas/pdf/Lista_sa.pdf">http://www.magrama.gob.es/agricultura/pags/fitos/regi stro/fichas/pdf/Lista_sa.pdf</a> ).
Sweden	Local name	n-Propanol
Sweden	nivågränsvärde (NVG) (mg/m <sup>3</sup> )	350 mg/m <sup>3</sup>
Sweden	nivågränsvärde (NVG) (ppm)	150 ppm
Sweden	kortidsvärde (KTV) (mg/m <sup>3</sup> )	600 mg/m <sup>3</sup>
Sweden	kortidsvärde (KTV) (ppm)	250 ppm
Sweden	Anmärkning (SE)	V (Vägledande kortidsgränsvärde ska användas som ett rekommenderat högsta värde som inte bör överskridas)
United Kingdom	Local name	Propan-1-ol
United Kingdom	WEL TWA (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup> Propan-1-ol; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL TWA (ppm)	200 ppm Propan-1-ol; United Kingdom; Time-weighted average exposure limit 8 h; Workplace exposure limit (EH40/2005)
United Kingdom	WEL STEL (mg/m <sup>3</sup> )	625 mg/m <sup>3</sup> Propan-1-ol; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)

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United Kingdom	WEL STEL (ppm)	250 ppm Propan-1-ol; United Kingdom; Short time value; Workplace exposure limit (EH40/2005)
United Kingdom	Remark (WEL)	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity)
Russian Federation	Local name	Пропан-1-ол
Russian Federation	OEL Ceiling (mg/m <sup>3</sup> )	30 mg/m <sup>3</sup>
Russian Federation	OEL TWA (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Russian Federation	Remark (RU)	3 класс опасности - опасное; п (пары и/или газы)
Norway	Local name	1-propanol
Norway	Grønseverdier (AN) (mg/m <sup>3</sup> )	245 mg/m <sup>3</sup>
Norway	Grønseverdier (AN) (ppm)	100 ppm
Norway	Merknader (NO)	H (Kjemikalier som kan tas opp gjennom huden)
Switzerland	Local name	n-Propanol
Switzerland	VME (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
Switzerland	VME (ppm)	200 ppm
Switzerland	Remark (CH)	H - Auge <sup>KT AN</sup> & OAW <sup>KT AN</sup> - INRS, NIOSH
Australia	Local name	Propyl alcohol
Australia	TWA (mg/m <sup>3</sup> )	492 mg/m <sup>3</sup> Synonym (Propan-1-ol)
Australia	TWA (ppm)	200 ppm Synonym (Propan-1-ol)
Australia	STEL (mg/m <sup>3</sup> )	614 mg/m <sup>3</sup> Synonym (Propan-1-ol)
Australia	STEL (ppm)	250 ppm Synonym (Propan-1-ol)
Australia	Remark (AU)	Sk - Absorption through the skin may be a significant source of exposure.
USA - ACGIH	Local name	n-Propanol (n-Propyl alcohol)
USA - ACGIH	ACGIH TWA (ppm)	100 ppm (n-Propanol (n-Propyl alcohol)); USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)
USA - ACGIH	Remark (ACGIH)	Eye & URT irr
USA - OSHA	Local name	n-Propyl alcohol
USA - OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	500 mg/m <sup>3</sup>
USA - OSHA	OSHA PEL (TWA) (ppm)	200 ppm

## 8.2. Exposure controls

### Materials for protective clothing:

GIVE EXCELLENT RESISTANCE: butyl rubber. nitrile rubber. viton. GIVE GOOD RESISTANCE: neoprene. tetrafluoroethylene. PVA. GIVE POOR RESISTANCE: natural rubber. PVC. plastics

### Hand protection:

Gloves

### Eye protection:

Safety glasses

### Skin and body protection:

Protective clothing

### Respiratory protection:

Wear gas mask with filter type A if conc. in air > exposure limit

Device	Filter type	Condition	Standard
Gas mask	Type A - High-boiling (>65 °C) organic compounds	If conc. in air > exposure limit	

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### SECTION 9: Physical and chemical properties

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

Physical state	: Liquid
Appearance	: Liquid.
Molecular mass	: 60.1 g/mol
Colour	: Colourless.
Odour	: Alcohol odour. Mild odour.
Odour threshold	: No data available
pH	: 7 (20 %)
pH solution	: 20 %
Relative evaporation rate (butylacetate=1)	: 1.3
Relative evaporation rate (ether=1)	: 11
Melting point	: -127 °C
Freezing point	: No data available
Boiling point	: 97 °C
Flash point	: 15 °C
Critical temperature	: 264 °C
Auto-ignition temperature	: 412 °C
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: 19 hPa (20 °C)
Vapour pressure at 50 °C	: 117 hPa (50 °C)
Critical pressure	: 51696 hPa
Relative vapour density at 20 °C	: 2.1
Relative density	: 0.8
Relative density of saturated gas/air mixture	: 1.02
Density	: 0.80 g/cm <sup>3</sup> (20 °C)
Solubility	: Soluble in water. Soluble in ethanol. Soluble in ether. Soluble in acetone. Soluble in propyleneglycol. Water: Complete Ethanol: Complete Ether: Complete Acetone: > 10 g/100ml
Log Pow	: 0.25 (Experimental value)
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 0.0023 Pa.s (20 °C)
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 2.1 – 19.2 vol %

#### 9.2. Other information

Specific conductivity	: 9170 pS/m
Saturation concentration	: 46 g/m <sup>3</sup>
VOC content	: 100 %
Other properties	: Gas/vapour heavier than air at 20°C. Clear. Volatile. Substance has neutral reaction.

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Upon combustion: CO and CO<sub>2</sub> are formed. Reacts violently with many compounds e.g.: with (strong) oxidizers and with (some) acids with (increased) risk of fire/explosion.

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### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

No additional information available

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

No additional information available

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

1-propanol (71-23-8)	
LD50 oral rat	1870 mg/kg (Rat)
LD50 dermal rabbit	5040 mg/kg (Rabbit)
LC50 inhalation rat (mg/l)	9.8 mg/l/4h (Rat)

Skin corrosion/irritation : Not classified  
pH: 7 (10 %)

Serious eye damage/irritation : Causes serious eye damage.  
pH: 7 (10 %)

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : May cause drowsiness or dizziness.

STOT-repeated exposure : Not classified

Aspiration hazard : Not classified

## SECTION 12: Ecological information

### 12.1. Toxicity

Ecology - general : Classification concerning the environment: not applicable.

Ecology - air : Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009). TA-Luft Klasse 5.2.5.

Ecology - water : Mild water pollutant (surface water). Ground water pollutant. Not harmful to fishes (LC50(96h) >1000 mg/l). Not harmful to invertebrates (Daphnia) (EC50 (48h) > 1000 mg/l). Not harmful to algae (EC50 >1000 mg/l). Highly toxic to plankton.

1-propanol (71-23-8)	
LC50 fish 2	4480 mg/l (LC50; 96 h; Pimephales promelas)
EC50 Daphnia 2	3644 mg/l (EC50; 48 h)

### 12.2. Persistence and degradability

1-propanol (71-23-8)	
Persistence and degradability	Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions.
Biochemical oxygen demand (BOD)	0.47 - 1.63 g O <sub>2</sub> /g substance
Chemical oxygen demand (COD)	2.23 g O <sub>2</sub> /g substance
ThOD	2.4 g O <sub>2</sub> /g substance
BOD (% of ThOD)	0.20 - 0.44

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### 12.3. Bioaccumulative potential

<b>1-propanol (71-23-8)</b>	
Log Pow	0.25 (Experimental value)
Bioaccumulative potential	Low potential for bioaccumulation (Log Kow < 4).

### 12.4. Mobility in soil

<b>1-propanol (71-23-8)</b>	
Surface tension	0.024 N/m (20 °C)

### 12.5. Results of PBT and vPvB assessment

No additional information available

### 12.6. Other adverse effects

No additional information available

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods






Product/Packaging disposal recommendations : Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle by distillation. Remove to an authorized waste incinerator for solvents with energy recovery. Do not discharge into surface water. Obtain the consent of pollution control authorities before discharging to wastewater treatment plants.

Additional information : LWCA (the Netherlands): KGA category 03. Hazardous waste according to Directive 2008/98/EC.

European List of Waste (LoW) code : 07 01 04\* - other organic solvents, washing liquids and mother liquors

## SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA	ADN	RID
<b>14.1. UN number</b>				
1274	1274	1274	1274	1274
<b>14.2. UN proper shipping name</b>				
N-PROPANOL (PROPYL ALCOHOL, NORMAL)	n-PROPANOL (PROPYL ALCOHOL, NORMAL)	n-Propanol	N-PROPANOL (PROPYL ALCOHOL, NORMAL)	n-PROPANOL (PROPYL ALCOHOL, NORMAL)
<b>Transport document description</b>				
UN 1274 N-PROPANOL (PROPYL ALCOHOL, NORMAL), 3, II, (D/E)	UN 1274 n-PROPANOL (PROPYL ALCOHOL, NORMAL), 3, II (15°C c.c.)	UN 1274 n-Propanol, 3, II	UN 1274 N-PROPANOL (PROPYL ALCOHOL, NORMAL), 3, II	UN 1274 n-PROPANOL (PROPYL ALCOHOL, NORMAL), 3, II
<b>14.3. Transport hazard class(es)</b>				
3	3	3	3	3
				
<b>14.4. Packing group</b>				
II	II	II	II	II
<b>14.5. Environmental hazards</b>				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR) : F1  
Limited quantities (ADR) : 1I  
Excepted quantities (ADR) : E2

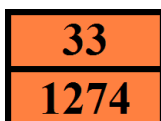
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Packing instructions (ADR) : P001, IBC02, R001  
Mixed packing provisions (ADR) : MP19  
Portable tank and bulk container instructions (ADR) : T4  
Portable tank and bulk container special provisions (ADR) : TP1  
Tank code (ADR) : LGBF  
Vehicle for tank carriage : FL  
Transport category (ADR) : 2  
Special provisions for carriage - Operation (ADR) : S2, S20  
Hazard identification number (Kemler No.) : 33  
Orange plates :



Tunnel restriction code (ADR) : D/E

### - Transport by sea

Transport regulations (IMDG) : Subject  
Limited quantities (IMDG) : 1 L  
Excepted quantities (IMDG) : E2  
Packing instructions (IMDG) : P001  
IBC packing instructions (IMDG) : IBC02  
Tank instructions (IMDG) : T4  
Tank special provisions (IMDG) : TP1  
EmS-No. (Fire) : F-E  
EmS-No. (Spillage) : S-D  
Stowage category (IMDG) : B  
Flash point (IMDG) : 15°C to 23°C c.c.  
Properties and observations (IMDG) : Colourless liquid. Explosive limits: 2% to 12% Flashpoint: 15°C to 23°C c.c. Miscible with water.  
MFAG-No : 129

### - Air transport

Transport regulations (IATA) : Subject to the provisions  
PCA Excepted quantities (IATA) : E2  
PCA Limited quantities (IATA) : Y341  
PCA limited quantity max net quantity (IATA) : 1L  
PCA packing instructions (IATA) : 353  
PCA max net quantity (IATA) : 5L  
CAO packing instructions (IATA) : 364  
CAO max net quantity (IATA) : 60L  
Special provisions (IATA) : A3  
ERG code (IATA) : 3L

### - Inland waterway transport

Classification code (ADN) : F1  
Limited quantities (ADN) : 1 L  
Excepted quantities (ADN) : E2  
Carriage permitted (ADN) : T  
Equipment required (ADN) : PP, EX, A  
Ventilation (ADN) : VE01  
Number of blue cones/lights (ADN) : 1

### - Rail transport

Transport regulations (RID) : Subject  
Classification code (RID) : F1

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Limited quantities (RID)	: 1L
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P001, IBC02, R001
Mixed packing provisions (RID)	: MP19
Portable tank and bulk container instructions (RID)	: T4
Portable tank and bulk container special provisions (RID)	: TP1
Tank codes for RID tanks (RID)	: LGBF
Transport category (RID)	: 2
Colis express (express parcels) (RID)	: CE7
Hazard identification number (RID)	: 33

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

Not applicable

## SECTION 15: Regulatory information

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

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

1-propanol is not on the REACH Candidate List

1-propanol is not on the REACH Annex XIV List

VOC content : 100 %

#### 15.1.2. National regulations

##### Germany

VwVwS Annex reference : Water hazard class (WGK) 1, low hazard to waters (Classification according to VwVwS, Annex 1 or 2; ID No. 176)

WGK remark : Classification water polluting in compliance with Verwaltungsvorschrift wassergefährdender Stoffe (VwVwS) of 27 July 2005 (Anhang 2)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

##### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

##### Denmark

Class for fire hazard : Class I-1

Store unit : 1 liter

Classification remarks : F <Flam. Liq. 2>; Emergency management guidelines for the storage of flammable liquids must be followed

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product  
Pregnant/breastfeeding women working with the product must not be in direct contact with the product  
The requirements from the Danish Working Environment Authorities regarding work with carcinogens must be followed during use and disposal

### 15.2. Chemical safety assessment

No additional information available

## SECTION 16: Other information

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### Abbreviations and acronyms:

ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
EC50	Median effective concentration
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
LC50	Median lethal concentration
LD50	Median lethal dose
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail

### Data sources

: REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

### Full text of H- and EUH-statements:

Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Flam. Liq. 2	Flammable liquids, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Narcosis
H225	Highly flammable liquid and vapour
H318	Causes serious eye damage
H336	May cause drowsiness or dizziness

### SDS ISOLAB

*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*