

2-Propanol

33539-5L

Version 1.9

Revision Date 12.04.2023

SECTION 2: Hazards identification


2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Flammable liquids Category 2
H225 Highly flammable liquid and vapour.
Eye irritation Category 2
H319 Causes serious eye irritation.
Specific target organ toxicity - single exposure Category 3 - Central nervous system
H336 May cause drowsiness or dizziness.

2.2. Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms	:	
Signal word	:	Danger
Hazard statements	:	H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.
Precautionary statements	:	P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. P280 Wear protective gloves/ eye protection/ face protection. P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308 + P313 IF exposed or concerned: Get medical advice/ attention.

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2.3. Other hazards

Has a degreasing effect on the skin. The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher. This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1. Substance

Chemical name	CAS-No. Index-No. REACH Registration Number EC-No.	Classification 1272/2008	Concentration	Remarks
Propan-2-ol	67-63-0 603-117-00-0 200-661-7	Flam. Liq. 2; H225 Eye Irrit. 2; H319 STOT SE 3; H336; Central nervous system	100 %	

3.2. Mixture

Not applicable

Occupational Exposure Limit(s), if available, are listed in Section 8.
For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice:

First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately.

Inhalation:

Remove to fresh air. If breathing is difficult, give oxygen. Use oxygen as required, provided a qualified operator is present. Call a physician.

Skin contact:

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Wash off immediately with plenty of water for at least 15 minutes. Take off contaminated clothing and shoes immediately. Wash contaminated clothing before re-use. Call a physician if irritation develops or persists.

Eye contact:

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Protect unharmed eye. Remove contact lenses. Call a physician immediately.

Ingestion:

Rinse mouth with water. Do NOT induce vomiting. Call a physician immediately.

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

No data available

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

No data available

See Section 11 for more detailed information on health effects and symptoms.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

Alcohol-resistant foam

Carbon dioxide (CO₂)

Dry chemical

Cool closed containers exposed to fire with water spray.

Extinguishing media which shall not be used for safety reasons:

High volume water jet

5.2. Special hazards arising from the substance or mixture

Flammable.

Vapours may form explosive mixtures with air.

Vapours are heavier than air and may spread along floors.

Vapors may travel to areas away from work site before igniting/flashing back to vapor source.

In case of fire hazardous decomposition products may be produced such as:

Carbon monoxide

Carbon dioxide (CO₂)

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective suit.

No unprotected exposed skin areas.

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Do not use a solid water stream as it may scatter and spread fire.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protective equipment. Immediately evacuate personnel to safe areas. Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Remove all sources of ignition. Do not breathe vapours or spray mist. Avoid contact with skin, eyes and clothing.

6.2. Environmental precautions

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Prevent further leakage or spillage if safe to do so. Discharge into the environment must be avoided. Do not flush into surface water or sanitary sewer system. Do not allow run-off from fire fighting to enter drains or water courses.

6.3. Methods and materials for containment and cleaning up

Ventilate the area.

Do not use sparking tools.

Use explosion-proof equipment.

Contain and collect spillage with non-combustible absorbent materials, e.g. sand, earth, vermiculite, diatomaceous earth and place in container for disposal according to local regulations (see section 13).

Pick for disposal in tightly closed containers

6.4. Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:

Wear personal protective equipment. Use only in well-ventilated areas. Use explosion-proof equipment.

Advice on protection against fire and explosion:

Keep away from fire, sparks and heated surfaces. No smoking. Take precautionary measures against static discharges. Vapours may form explosive mixtures with air. Use only in explosion-proof areas.

Hygiene measures:

When using do not eat, drink or smoke. Wash hands before breaks and immediately after handling the product. Keep working clothes separately. Remove and wash contaminated clothing before re-use. Do not breathe dust or spray mist. Avoid contact with skin, eyes and clothing.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers:

Store in original container. Store in area designed for storage of flammable liquids. Protect from physical damage. Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight. Keep away from heat and sources of ignition.

7.3. Specific end use(s)

no additional data available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

Components	Basis / Value type	Value / Form of exposure	Exceeding Factor	Remarks
Propan-2-ol	EH40 WEL TWA	999 mg/m ³ 400 ppm		
Propan-2-ol	EH40 WEL STEL	1.250 mg/m ³ 500 ppm	15 minutes	

TWA - Time weighted average

STEL - Short term exposure limit

DNEL/ PNEC-Values

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
Propan-2-ol	Consumers / Long-term systemic effects		26mg/kg bw/d	Ingestion	
Propan-2-ol	Consumers / Long-term systemic effects		319 mg/kg	Skin contact	
Propan-2-ol	Workers / Long-term systemic effects		888 mg/kg	Skin contact	
Propan-2-ol	Consumers / Long-term systemic effects		89 mg/m ³	Inhalation	
Propan-2-ol	Workers / Long-term systemic effects		500 mg/m ³	Inhalation	

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Component	Environmental compartment / Value	Remarks
Propan-2-ol	Fresh water: 140,9 mg/l	
Propan-2-ol	Marine water: 140,9 mg/l	
Propan-2-ol	Fresh water sediment: 552 mg/kg	
Propan-2-ol	Marine sediment: 552 mg/kg	
Propan-2-ol	Soil: 28 mg/kg	
Propan-2-ol	Sewage treatment plant: 2251 mg/l	

8.2. Exposure controls

Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.

Ensure that eyewash stations and safety showers are close to the workstation location.

Do not breathe vapours or spray mist.

Engineering measures

Use with local exhaust ventilation.

Prevent vapour buildup by providing adequate ventilation during and after use.

Personal protective equipment

Respiratory protection:

In the case of vapour formation use a respirator with an approved filter.

Recommended Filter type:

Organic vapour type

Hand protection:

Glove material: butyl-rubber

Break through time: > 480 min

Glove thickness: 0,7 mm

Butoject® 898

Gloves must be inspected prior to use.

Replace when worn.

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Remarks: Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

Supplementary note: The specifications are based on information and tests from similar substances by analogy.

Due to varying conditions (e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.

Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer recommends to use the chemical protective glove in practice not longer than 50% of the recommended permeation time.

Manufacturer's directions for use should be observed because of great diversity of types .

Eye protection:

Safety goggles

Skin and body protection:

Flame retardant antistatic protective clothing.

Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	liquid
Colour	:	colourless
Odour	:	alcohol-like
molecular weight	:	60,11 g/mol
Melting point/range	:	-90 °C
Boiling point/boiling range	:	77 - 83 °C at 1.013 hPa
Upper explosion limit	:	12 %(V)
Lower explosion limit	:	2 %(V)

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Flash point	:	12 °C Method: DIN 51755
Auto-ignition temperature	:	ca.425 °C
Decomposition temperature	:	No decomposition if used as directed.
pH	:	neutral
Viscosity, kinematic	:	2,66 mm ² /s at 25 °C
Water solubility	:	completely miscible
Solubility in other solvents	:	Soluble in most organic solvents
Partition coefficient: n-octanol/water	:	log Pow 0,05 at: 25 °C
Vapour pressure	:	ca. 42 hPa at 20 °C
Density	:	0,7855 g/cm ³ at 20 °C
Relative vapour density	:	> 1 (Air = 1.0)

9.2 Other Information

Evaporation rate	:	No data available
Viscosity, dynamic	:	ca. 2,5 mPa.s at 20 °C

SECTION 10: Stability and reactivity

10.1. Reactivity

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Stable under recommended storage conditions.

10.2. Chemical stability

No decomposition if used as directed.

10.3. Possibility of hazardous reactions

Vapours may form explosive mixture with air.
Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Heat, flames and sparks.
Keep away from direct sunlight.

10.5. Incompatible materials

Strong oxidizing agents

10.6. Hazardous decomposition products

In case of fire hazardous decomposition products may be produced such as:
Carbon monoxide
Carbon dioxide (CO₂)

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity:

LD50

Species: Rat

Value: 5.840 mg/kg

Method: OECD Test Guideline 401

Acute dermal toxicity:

No data available

Acute inhalation toxicity:

LC50

Species: Rat

Value: > 10000 ppm

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Exposure time: 6 h
Method: OECD Test Guideline 403
Test atmosphere: vapour

Skin irritation:

Species: Rabbit
Result: slight irritation

According to the classification criteria of the European Union, the product is not considered as being a skin irritant.

Eye irritation:

Species: Rabbit
Result: irritating
Method: OECD Test Guideline 405

Respiratory or skin sensitisation:

Buehler Test
Species: Guinea pig
Result: non-sensitizing
Method: OECD Test Guideline 406

Carcinogenicity:

Species: not specified
Note: Not classified due to data which are conclusive although insufficient for classification.

Germ cell mutagenicity:

Test Method: In vitro mammalian cell gene mutation test
Cell type: Chinese Hamster Ovary Cells
Metabolic activation: with and without metabolic activation
Result: negative
Method: OECD Test Guideline 476

Test Method: Ames test
Metabolic activation: with and without metabolic activation
Result: negative
Method: OECD Test Guideline 471

Test Method: Micronucleus test
Species: Mouse
Method: OECD Test Guideline 474
Result: negative

Reproductive toxicity:

Species: not specified

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Remarks: Not classified due to data which are conclusive although insufficient for classification.

Aspiration hazard:

No data available

11.2. Information on other hazards

Endocrine disrupting properties

No data available

Other information:

Solvent vapours have a narcotic effect if inhaled in high concentrations.

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish:

LC50

flow-through test

Species: Pimephales promelas (fathead minnow)

Value: 9.640 mg/l

Exposure time: 96 h

Method: OECD Test Guideline 203

Toxicity to aquatic plants:

Not classified due to data which are conclusive although insufficient for classification.

Toxicity to Microorganisms:

static test

Species: Pseudomonas putida

Value: 1.050 mg/l

Exposure time: 16 h

Method: DIN 38412

Toxicity to aquatic invertebrates:

EC50

static test

Species: Daphnia magna (Water flea)

Value: > 10.000 mg/l

Exposure time: 24 h

Method: OECD Test Guideline 202

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12.2. Persistence and degradability

Biodegradability:

Readily biodegradable.

12.3. Bioaccumulative potential

Bioaccumulation is unlikely.

Bioaccumulation is unlikely.

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

This substance is not considered to be persistent, bioaccumulating and toxic (PBT).

This substance is not considered to be very persistent and very bioaccumulating (vPvB).

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:

Dispose according to legal requirements.

Packaging:

Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

Further information:

Provisions relating to waste:

EC Directive 2006/12/EC; 2008/98/EEC

Regulation No. 1013/2006

For personal protection see section 8.

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SECTION 14: Transport information

14.1 UN number

ADR/RID:1219

IMDG:1219

IATA:1219

14.2 UN proper shipping name

ADR/RID:ISOPROPANOL

IMDG:ISOPROPANOL

IATA:Isopropanol

14.3 Transport hazard class(es)

ADR/RID: 3

IMDG: 3

IATA: 3

14.4 Packaging group

ADR/RID: II

IMDG: II

IATA: II

14.5 Environmental hazards

ADR/RID:no

Marine pollutant: no

14.6 Special precautions for user

No data available

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information

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

Basis	Value	Remarks
Directive 2012/18/EC SEVESO III Listed in Regulation : P5c: FLAMMABLE LIQUIDS Number in Regulation: 1.2.5.3	Quantity: 5.000.000 kg Quantity: 50.000.000 kg	
Substances of very high concern (SVHC)		This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of $\geq 0.1\%$ (w/w).

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Regulation (EC) No. 1907/2006, Annex XIV		Not listed
Regulation (EC) No. 1907/2006, Annex XVII		Not listed

VOC:

Directive 2010/75/EU of 24 November 2010 on industrial emissions (integrated pollution prevention and control), 100 %

VOC:

Directive 2004/42/EC, 100 %

Poison Control Center

Country	Phone Number
Austria	+4314064343
Belgium	070 245245
Bulgaria	(+35929154233
Croatia	(+3851)23-48-342
Cyprus	+357 2240 5611
Czech Republic	+420224919293; +420224915402
Denmark	82121212
Estonia	16662; (+372)6269390
Finland	9471977
France	+33(0)145425959
Greece	+30 210 779 3777
Hungary	(+36-80)201-199
Iceland	5432222
Ireland	+353(1)8092166
Italy	0382 24444
Germany	Berlin : 030/19240
	Bonn : 0228/19240
	Erfurt : 0361/730730

Country	Phone Number
Liechtenstein	+41 442515151
Lithuania	+370532362052
Luxembourg	070245245; (+352)80002-5500
Malta	+356 2395 2000
Netherlands	030-2748888
Norway	22591300
Poland	+48 42 25 38 400
Portugal	800250250
Romania	+40 21 318 3606
Slovakia (NTIC)	+421 2 54 774 166
Slovenia	+386 1 400 6051
Spain	+34915620420 112 (begär Gifftinformation);+46104566786
Sweden	
Switzerland	145
United Kingdom	(+44) 844 892 0111

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	Freiburg : 0761/19240
	Göttingen : 0551/19240
	Homburg : 06841/19240
	Mainz : 06131/19240
	Munich : 089/19240
Latvia	+37167042473

Other inventory information

US. Toxic Substances Control Act
On TSCA Inventory

Australia. Inventory of Industrial Chemicals (AIIC), as amended
On the inventory, or in compliance with the inventory

Canada. Canadian Environmental Protection Act (CEPA). Domestic Substances List (DSL)
All components of this product are on the Canadian DSL

Japan. Kashin-Hou Law List
On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)
On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI)
On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

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SECTION 16: Other information

Text of H-statements referred to under heading 3

Propan-2-ol : H225 Highly flammable liquid and vapour.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

Further information

All directives and regulations refer to amended versions.
Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:

EC European Community
CAS Chemical Abstracts Service
DNEL Derived no effect level
PNEC Predicted no effect level
vPvB Very persistent and very bioaccumulative substance
PBT Persistent, bioaccumulative und toxic substance

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. Final determination of suitability of any material is the sole responsibility of the user.

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