

## Chemical Safety Data Sheet MSDS / SDS

## 1-chloropropan-2-ol SDS

Revision Date:2024-04-25 Revision Number:1

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

Product name: 1-chloropropan-2-ol

CAS: 127-00-4

**Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses: For R&amp;D use only. Not for medicinal, household or other use.

Uses advised against: none

**Company Identification**

Company: Chemicalbook.in

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**SECTION 2: Hazards identification****Classification of the substance or mixture**

Flammable liquids, Category 3

Acute toxicity - Category 4, Oral

Skin irritation, Category 2  
Eye irritation, Category 2  
Acute toxicity - Category 4, Inhalation  
Specific target organ toxicity - single exposure, Category 3

#### GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Warning

#### Hazard statement(s)

H226 Flammable liquid and vapour  
H302 Harmful if swallowed  
H315 Causes skin irritation  
H319 Causes serious eye irritation  
H332 Harmful if inhaled  
H335 May cause respiratory irritation

#### Precautionary statement(s)

#### Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P233 Keep container tightly closed.  
P240 Ground and bond container and receiving equipment.  
P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.  
P242 Use non-sparking tools.  
P243 Take action to prevent static discharges.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...  
P264 Wash ... thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P271 Use only outdoors or in a well-ventilated area.

#### Response

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].  
P370+P378 In case of fire: Use ... to extinguish.  
P301+P317 IF SWALLOWED: Get medical help.

P330 Rinse mouth.  
P302+P352 IF ON SKIN: Wash with plenty of water/...  
P321 Specific treatment (see ... on this label).  
P332+P317 If skin irritation occurs: Get medical help.  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P317 Get medical help.  
P319 Get medical help if you feel unwell.

#### **Storage**

P403+P235 Store in a well-ventilated place. Keep cool.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P405 Store locked up.

#### **Disposal**

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

#### **Other hazards which do not result in classification**

no data available

### **SECTION 3: Composition/information on ingredients**

#### **Substance**

Chemical name:	1-chloropropan-2-ol
Common names and synonyms:	1-chloropropan-2-ol
CAS number:	127-00-4
EC number:	204-819-6
Concentration:	100%

### **SECTION 4: First aid measures**

### **Description of necessary first-aid measures**

#### **If inhaled**

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

#### **Following skin contact**

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

#### **Following eye contact**

Rinse with pure water for at least 15 minutes. Consult a doctor.

#### **Following ingestion**

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

### **Most important symptoms/effects, acute and delayed**

**SYMPTOMS:** This compound causes skin and eye irritation. It may also be irritating to the mucous membranes and upper respiratory tract. Other symptoms include nasal irritation, nausea, vomiting, giddiness, dizziness, incoordination, visual disturbances and coma. It may also cause hemolysis, central nervous system effects and liver and kidney damage. Coughing, confusion and unconsciousness have also been reported. **ACUTE/CHRONIC HAZARDS:** This compound may be harmful by inhalation, ingestion or skin absorption. The vapor or mist is irritating to the skin, eyes, mucous membranes and upper respiratory tract. It may be absorbed through the skin. When heated to decomposition it emits toxic fumes of chlorine, carbon monoxide carbon dioxide and hydrogen chloride gas. (NTP, 1992)

### **Indication of immediate medical attention and special treatment needed, if necessary**

Basic treatment: Establish a patent airway. Suction if necessary. Watch for signs of respiratory insufficiency and assist ventilations if necessary. Administer oxygen by nonrebreather mask at 10 to 15 L/min. Monitor for shock and treat if necessary . Monitor for pulmonary edema and treat if necessary . Anticipate seizures and treat if necessary . For eye contamination, flush eyes immediately with water. Irrigate each eye continuously with normal saline during transport . Do not use emetics. For ingestion, rinse mouth and administer 5 mL/kg up to 200 mL of water for dilution if the patient can swallow, has a strong gag reflex, and does not drool. Administer activated charcoal . Higher alcohols (> 3 carbons) and related compounds

## **SECTION 5: Firefighting measures**

**Suitable extinguishing media**

Alc foam, spray, mist, dry chem.

**Specific hazards arising from the chemical**

This chemical is combustible. (NTP, 1992)

**Special protective actions for fire-fighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**SECTION 6: Accidental release measures****Personal precautions, protective equipment and emergency procedures**

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

**Environmental precautions**

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

**Methods and materials for containment and cleaning up**

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

**SECTION 7: Handling and storage****Precautions for safe handling**

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

**Conditions for safe storage, including any incompatibilities**

Should be stored in cool, well-ventilated place, out of direct rays of sun, away from areas of high fire hazard, &...periodically inspected & monitored. incompatible materials should be isolated from each other.

## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Occupational Exposure limit values

Component	1-chloropropan-2-ol			
CAS No.	127-00-4			
	Limit value - Eight hours		Limit value - Short term	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>
Belgium	1	4	?	?
Canada - Ontario	1	?	?	?
Latvia	?	?	?	?
Spain	1	?	?	?
	Remarks			
Spain	skin			

#### Biological limit values

no data available

#### Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

#### Individual protection measures, such as personal protective equipment (PPE)

##### Eye/face protection

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

##### Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

##### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

#### Thermal hazards

no data available

### SECTION 9: Physical and chemical properties and safety characteristics

Physical state:	PHYSICAL DESCRIPTION: Clear colorless to light amber liquid with a mild non residual odor. (NTP, 1992)
Colour:	COLORLESS LIQUID
Odour:	no data available
Melting point/freezing point:	191°C(dec.)(lit.)
Boiling point or initial boiling point and boiling range:	127°C
Flammability:	no data available
Lower and upper explosion limit/flammability limit:	no data available
Flash point:	52°C(lit.)
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
pH:	no data available
Kinematic viscosity:	no data available
Solubility:	greater than or equal to 100 mg/mL at 73° F (NTP, 1992)

Partition coefficient n-octanol/water:	no data available
Vapour pressure:	14.384mmHg at 25°C
Density and/or relative density:	1.111 g/mL at 25°C(lit.)
Relative vapour density:	3.3 (NTP, 1992) (Relative to Air)
Particle characteristics:	no data available

## SECTION 10: Stability and reactivity

### Reactivity

no data available

### Chemical stability

no data available

### Possibility of hazardous reactions

MODERATE, WHEN EXPOSED TO HEAT OR FLAME. May be sensitive to prolonged exposure to light. Incompatible with strong oxidizing agents. (NTP, 1992)

### Conditions to avoid

no data available

### Incompatible materials

REACTIVITY: This chemical is incompatible with strong oxidizing agents. STABILITY: This chemical may be sensitive to prolonged exposure to light. Solutions of this chemical in water, DMSO, 95% ethanol or acetone should be stable for 24 hours under normal lab conditions. When heated to decomposition it emits toxic fumes of chlorine, carbon monoxide, carbon dioxide and hydrogen chloride gas. (NTP)



### **Hazardous decomposition products**

When heated to decomp, it emits highly toxic fumes of /hydrogen chloride/.

## **SECTION 11: Toxicological information**

### **Acute toxicity**

Oral: LD50 Rat oral 100 to 300 mg/kg, 381 mg/kg, and 0.22 mL/kg

Inhalation: LC50 Rat inhalation 1000 ppm/4 hr

Dermal: no data available

### **Skin corrosion/irritation**

no data available

### **Serious eye damage/irritation**

no data available

### **Respiratory or skin sensitization**

no data available

### **Germ cell mutagenicity**

no data available

### **Carcinogenicity**

TLV-A4

### **Reproductive toxicity**

no data available

### **STOT-single exposure**

no data available

**STOT-repeated exposure**

no data available

**Aspiration hazard**

no data available

**SECTION 12: Ecological information****Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

**Persistence and degradability**

no data available

**Bioaccumulative potential**

An estimated BCF of 3 was calculated for 1-chloro-2-propanol(SRC), using an estimated log Kow of 0.53(1,SRC) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low.

**Mobility in soil**

Using a structure estimation method based on molecular connectivity indices(1), the Koc for 1-chloro-2-propanol can be estimated to be about 2(SRC). According to a classification scheme(2), this estimated Koc value suggests that 1-chloro-2-propanol is expected to have very high mobility in soil.

**Other adverse effects**

no data available

## SECTION 13: Disposal considerations

### Disposal methods

#### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

#### Contaminated packaging

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

## SECTION 14: Transport information

### UN Number

ADR/RID: UN2611 (For reference only, please check.)

IMDG: UN2611 (For reference only, please check.)

IATA: UN2611 (For reference only, please check.)

### UN Proper Shipping Name

ADR/RID: PROPYLENE CHLOROHYDRIN (For reference only, please check.)

IMDG: PROPYLENE CHLOROHYDRIN (For reference only, please check.)

IATA: PROPYLENE CHLOROHYDRIN (For reference only, please check.)

### Transport hazard class(es)

ADR/RID: 6.1 (For reference only, please check.)

IMDG: 6.1 (For reference only, please check.)

IATA: 6.1 (For reference only, please check.)

### Packing group, if applicable

ADR/RID: II (For reference only, please check.)

IMDG: II (For reference only, please check.)

IATA: II (For reference only, please check.)

### **Environmental hazards**

ADR/RID: No

IMDG: No

IATA: No

### **Special precautions for user**

no data available

### **Transport in bulk according to IMO instruments**

no data available

## **SECTION 15: Regulatory information**

**Safety, health and environmental regulations specific for the product in question**

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

**EC Inventory**

Listed.

**United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

**China Catalog of Hazardous chemicals 2015**

Listed.

**New Zealand Inventory of Chemicals (NZIoC)**

Listed.

**(PICCS)**

Not Listed.

**Vietnam National Chemical Inventory**

Listed.

**IECSC)**

Listed.

**Korea Existing Chemicals List (KECL)**

Listed.

## **SECTION 16: Other information**

### **Abbreviations and acronyms**

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### **References**

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:  
[http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website:  
<http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

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