# Chemical Safety Data Sheet MSDS / SDS

# (R)-(-)-3-Chloro-1,2-propanediol

Revision Date:2025-02-01 Revision Number:1

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

# **Product identifier**

: (R)-(-)-3-Chloro-1,2-propanediol				
: CB8194510				
: 57090-45-6				
: 435-560-9				
: (R)-3-chloropropane-1,2-diol, (R) - (-) -3-Chloro-1, 2-propanediol				
Relevant identified uses of the substance or mixture and uses advised against				
: For R&D use only. Not for medicinal, household or other use.				
: none				
: Chemicalbook				
: Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing				
: 400-158-6606				

# SECTION 2: Hazards identification

# Classification of the substance or mixture

Acute toxicity - Category 3, Oral Serious eye damage, Category 1

### Label elements

# Pictogram(s)

Signal word

Danger

Hazard statement(s)

H300 Fatal if swallowed

H301 Toxic if swalloed

H311 Toxic in contact with skin

H312 Harmful in contact with skin

H315 Causes skin irritation

H318 Causes serious eye damage

H331 Toxic if inhaled

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#### H332 Harmful if inhaled

H335 May cause respiratory irritation

H341 Suspected of causing genetic defects

H360 May damage fertility or the unborn child

H361 Suspected of damaging fertility or the unborn child

#### Precautionary statement(s)

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P264 Wash hands thoroughly after handling.

P264 Wash skin thouroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P271 Use only outdoors or in a well-ventilated area.

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

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

#### Continuerinsing.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P405 Store locked up.

P501 Dispose of contents/container to.....

#### Prevention

P264 Wash ... thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

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

#### Response

P301+P316 IF SWALLOWED: Get emergency medical help immediately.

P321 Specific treatment (see ... on this label).

P330 Rinse mouth.

P305+P354+P338 IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P317 Get medical help.

#### Storage

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

no data available

# SECTION 3: Composition/information on ingredients

### Substance

Product name	: (R)-(-)-3-Chloro-1,2-propanediol
Synonyms	: (R)-3-chloropropane-1,2-diol, (R) - (-) -3-Chloro-1, 2-propanediol
CAS	: 57090-45-6
EC number	: 435-560-9
MF	: C3H7ClO2
MW	: 110.54

# SECTION 4: First aid measures

### Description of 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 and effects, both acute and delayed

no data available

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

no data available

# **SECTION 5: Firefighting measures**

### **Extinguishing media**

Use dry chemical, carbon dioxide or alcohol-resistant foam.

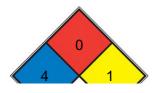
# Specific Hazards Arising from the Chemical

no data available

#### Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

# **NFPA 704**



<ul> <li>HEALTH 4 Very short exposure could cause death or major residual injury (e.g. hydrogen cyanide, phosgene, methyl isocyanate, hydrofluoric acid)</li> <li>Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride)</li> <li>REACT 1 Normally stable, but can become unstable at elevated temperatures and pressures (e.g. propene)</li> </ul>	
FIRE 0 stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride)	
<b>REACT</b> 1 Normally stable, but can become unstable at elevated temperatures and pressures (e.g. propene)	
SPEC. HAZ.	

# 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 sparkproof 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

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

# SECTION 8: Exposure controls/personal protection

#### **Control parameters**

**Occupational Exposure limit values** 

no data available

#### **Biological limit values**

no data available

### **Exposure controls**

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

#### Individual protection measures

#### 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

# Information on basic physicochemical properties

Physical state	Liquid. Viscous.
Colour	no data available
Odour	no data available
Melting point/freezing point	< -23 °C.
Boiling point or initial boiling point and	230 °C. Atm. press.:101.3 kPa.
boiling range	
Flammability	no data available
Lower and upper explosion	no data available
limit/flammability limit	
Flash point	138 °C.
Auto-ignition temperature	392 °C.
Decomposition temperature	no data available
рН	no data available
Kinematic viscosity	no data available
Solubility	no data available
Partition coefficient n-octanol/water	log Pow = -0.56. Temperature:21 °C.
Vapour pressure	0.04 mm Hg ( 25 °C)
Density and/or relative density	1.322
Relative vapour density	1.322
Particle characteristics	no data available

# SECTION 10: Stability and reactivity

# Reactivity

no data available

**Chemical stability** 

no data available

### Possibility of hazardous reactions

no data available

### Conditions to avoid

no data available

# Incompatible materials

no data available

# Hazardous decomposition products

no data available

# SECTION 11: Toxicological information

# Acute toxicity

- Oral: no data available
- Inhalation: no data available
- Dermal: LD50 (male/female) 410 mg/kg bw.

#### 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

no data available

### **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: LC50 - Oncorhynchus mykiss (previous name: Salmo gairdneri) - > 100 mg/L - 96 h. Toxicity to daphnia and other aquatic invertebrates: EC50 - other aquatic crustacea: - > 100 mg/L - 48 h. Toxicity to algae: EC50 - Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) - > 75 mg/L - 72 h. Toxicity to microorganisms: IC50 - > 3 200 mg/L - 3 h.

#### Persistence and degradability

no data available

**Bioaccumulative potential** 

no data available

#### Mobility in soil

no data available

### 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: no data available IMDG: no data available IATA: no data available

# **UN Proper Shipping Name**

ADR/RID: no data available IMDG: no data available IATA: no data available

# 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: III (For reference only, please check.) IMDG: III (For reference only, please check.) IATA: III (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)

Not Listed.

EC Inventory

Not Listed.

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

Not Listed.

China Catalog of Hazardous chemicals 2015

Not Listed. New Zealand Inventory of Chemicals (NZIoC) Not Listed. PICCS Not Listed. Vietnam National Chemical Inventory Listed. IECSC Not Listed. Korea Existing Chemicals List (KECL) Not 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

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

ChemlDplus, 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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