

SAFETY DATA SHEET



In accordance with 453/2010 and 1272/2008

(All references to EU regulations and directives are abbreviated into only the numeric term)

Issued 2016-11-09; Updated 2022-03-21

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Trade name

3-Chloro-1,2-propanediol-d5

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

Identified uses

Laboratory chemicals

1.3. Details of the supplier of the safety data sheet

Company

Larodan AB
Karolinska Institutet Science Park
Retzius väg 8
SE-171 65 SOLNA
Sweden
+46 20 15 22 00
info@larodan.com
www.larodan.com

Telephone

E-mail

Website

1.4. Emergency telephone number

In case of emergency contact toxicological information, emergency tel 112 (within Europe) or 1-800-222-1222 (for USA). For other countries, use the built-in emergency number in your cell phone

For non-emergency poison information, see http://www.who.int/gho/phe/chemical_safety/poisons_centres/en/

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification in accordance with 1272/2008

Skin irritation

2.2. Label elements

Label information in accordance with 1272/2008

Hazard pictograms



Signal words

Danger

Hazard statements

H300 Fatal if swallowed.
H330 Fatal if inhaled.
H312 Harmful in contact with skin.
H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
H360 May damage fertility or the unborn child.

Precautionary statements

P201 Obtain special instructions before use.
P261 Avoid breathing dust/fume/gas/mist/vapours/spray
P264 Wash hands thoroughly after handling
P280 Wear protective gloves/protective clothing/eye protection/face protection
P301/P310 IF SWALLOWED: Immediately call 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 - continue rinsing.
Call a poison center or a doctor/physician.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

This product is composed of a pure or almost pure substance.

3.1. Substances

Synonyms

3-Chloro-1,2-propanediol-d5

Chemical formula $C_3H_2D_5ClO_2$
Molecular weight 115.57

Constituent	Purity
3-Chloro-1,2-propanediol-d5	
CAS No	342611-01-2
	>99%

Occurrence of any impurity, stabilising additive, or individual ingredients other than the main ingredient is indicated by the chemical name and the purity level.

Explanations to the classification and labelling of the ingredients are given in Section 16e. Official abbreviations are printed in normal font. Text in italics are specifications and/or complement used in the calculation of the hazards of this mixture, see Section 16b

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures

Generally

In case of concern, or if symptoms persist, call doctor/physician.

Upon breathing in

Inhalation of fumes from heated product: let the injured rest at a warm place with fresh air. If not breathing, give artificial respiration and consult a physician

Upon contact with the eyes

Rinse the eye thoroughly with water for 15 minutes. Continue rinsing eyes during transport to hospital.

Upon skin contact

Remove contaminated clothes.

Normal washing of the skin is considered sufficient; If nevertheless symptoms do occur, contact a physician.

Upon ingestion

Flush nose, mouth and throat with water. Do not induce vomiting unless advised to do so by a physician or poison control center. Seek medical advice.

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

Behavioral such as somnolence, ataxia and tremor. Ingestion of large amounts of the product may cause nausea and vomiting.

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

No data available.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing media

Recommended extinguishing agents

Extinguish with materials intended for the surrounding fire.

Unsuitable extinguishing agents

Among common extinguishing agents there are none that are overtly unsuitable.

5.2. Special hazards arising from the substance or mixture

Produces fumes containing harmful gases (carbon monoxide, carbon dioxide, hydrogen chloride) when burning.

The product is not hazardous in the flammable sense.

5.3. Advice for fire-fighters

In case of fire use a respirator mask.

Wear full protective clothing.

Protective measures should be taken regarding other material at the site of the fire.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use recommended safety equipment, see section 8.

Note that there is a risk of slipping if product is leaking/spilling.

6.2. Environmental precautions

At amounts considered in this case, the product may be released into the natural environment without serious environmental consequences. Large emissions should however be reported to the emergency services and the Environment Agency.

6.3. Methods and material for containment and cleaning up

Small spills can be wiped up with a cloth or similar. Then flush the spill site with water. Larger spills should first be covered with sand or earth and then be collected. Collected material should be disposed according to Section 13.

6.4. Reference to other sections

See section 8 and 13 for personal protection equipment and disposal considerations

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

- Read and follow the manufacturer's instructions.
- Avoid spillage, inhalation and contact with eyes and skin.
- Keep well closed.
- The usual precautions for handling chemicals should be observed.

7.2. Conditions for safe storage, including any incompatibilities

- Keep container tightly closed in a dry and well ventilated space at -20 °C.

7.3. Specific end uses

- For scientific research and development only. Not for use in humans or animals.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

8.1.1. National limit values, United Kingdom

- All ingredients (cf. Section 3) lack occupational exposure limit values.

8.2. Exposure controls

- For the safety and health protection of workers according to EU directives 89/391 , 98/24 and 98/24 and national occupational legislation, measures due to both the physical and general health hazards of this product and the carcinogenic and/or mutagenic properties of any of the ingredients (see Sections 2, 3, 10 and 11) must be considered.
- All recommendations below are advisory in nature and a risk assessment should be performed by the employment/end user prior to use of this product. The type of protective equipment must be based on the amount and concentration of the dangerous material being used in the workplace.
- Use protective glasses, safety goggles, or a visor. Tested and approved according to standards stated for example by EN 166 (EU), NIOSH (National Institute of Occupational Safety and Health, USA).
- Work in a laboratory fumehood or other appropriate form of local exhaust ventilation to avoid exposure. Protective breathing protection are only to be used as a backup to local exhaust ventilation or other engineering controls. Recommended respirators are NIOSH-approved N100 or CEN-approved FFP3 particulate respirators.
- Gloves should be used when working with this material. Gloves are to be inspected prior to use. Disposal of contaminated gloves after use in compliance with good laboratory practice and local requirement. Use gloves of Butyl, Viton or Nitrile rubber. Depending on the level of exposure use gloves with a chemical resistance suitable for the anticipated use of the material according to EU standard EN 374.
- Use protective clothing.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

a) Appearance	Form: liquid Colour: colourless oil
b) Odour	Not applicable
c) Odour threshold	Not applicable
d) pH	Not applicable
e) Melting point/freezing point	Not applicable
f) Initial boiling point and boiling range	Not applicable
g) Flash point	Not applicable
h) Evaporation rate	Not applicable
i) Flammability (solid, gas)	
j) Upper/lower flammability or explosive limits	Not applicable
k) Vapour pressure	Not applicable
l) Vapour density	Not applicable
m) Relative density	Not applicable
n) Solubility	Solubility: Water(Slightly) Chloroform(Slightly) Methanol(Slightly)
o) Partition coefficient: n-octanol/water	Not applicable
p) Auto-ignition temperature	Not applicable
q) Decomposition temperature	Not applicable
r) Viscosity	Not applicable
s) Explosive properties	Not applicable
t) Oxidising properties	Not applicable

9.2. Other information

No data available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available

10.2. Chemical stability

The product is stable at normal storage and handling conditions.

10.3. Possibility of hazardous reactions

No data available

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

Avoid contact with oxidizers.

10.6. Hazardous decomposition products

In case of fire see section 5. Other decompositions products no data available.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Acute effects

Oral LD50: Rat - 26mg/kg **Dermal LD50:** Rabbit 1,056 mg/kg **Inhalation LC50:** No data available

Harmfulness

The product is classified as harmful to health.

Repeated dose toxicity

No chronic effects have been reported for this product.

Carcinogenicity

Evidence of carcinogenic effects. This compound has been designated by the IARC as group 2B: Possibly carcinogenic to humans.

CMR effects

Possible human reproductive toxin/teratogen. Several laboratory studies have shown reproductive toxicity/teratogenicity in animals.

Sensibilisation

No data available.

Corrosive and irritating effects

No data available

Synergism and antagonism

No data available

Effect on judgement and other psychological effects

No data available

Potential Health Effects and Routes of Exposure

Inhalation: Toxic if inhaled. May cause respiratory tract irritation.

Ingestion: May be fatal if swallowed.

Skin: Harmful if absorbed through skin. May cause skin irritation.

Eyes: Causes severe eye irritation.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

3-Chloro-1,2-propanediol

No ecological damage is known or expected in the event of normal use.

12.2. Persistence and degradability

Result: Not readily biodegradable.

12.3. Bioaccumulative potential

Does not bioaccumulate.

12.4. Mobility in soil

The product is not soluble in water and will spread on aquatic surfaces.

12.5. Results of PBT and vPvB assessment

No chemical safety report has been executed.

12.6. Other adverse effects

Biochemical Oxygen Demand (BOD): 980 mg/g

Chemical Oxygen Demand (COD): 10 mg/g

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste handling for the product

Product as well as packaging must be disposed as hazardous waste.

Not completely empty packaging can contain remnants of dangerous substances and should therefore be handled as hazardous waste according to the above. Completely empty packaging can be recycled.

Avoid discharge into sewers.

Observe local regulations.

Residual, old or contaminated product should be disposed of at a waste management facility.

Transportation of waste

Waste class J(1) - Substances classified as harmful or irritating.

SECTION 14: TRANSPORT INFORMATION

14.1. UN number

UN2689

14.2. UN proper shipping name

Maritime Transport	IMDG	Glycerol alpha-monochlorohydrin
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Air Transportation	ICAO/IATA	Glycerol alpha-monochlorohydrin
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Land Transport	ADR/RID	Glycerol alpha-monochlorohydrin
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14.3. Transport hazard class(es)

6.1

14.4. Packing group

III

14.5. Environmental hazards

None

14.6. Special precautions for user

None

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable

SECTION 15: REGULATORY INFORMATION

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

Not applicable.

15.2. Chemical safety assessment

Assessment and chemical safety report in accordance with 1907/2006 Annex I has not yet been performed.

SECTION 16: OTHER INFORMATION

16a. Indication of where changes have been made to the previous version of the safety data sheet

Revisions of this document

This is the second version. Changes in section 14.

16b. Legend to abbreviations and acronyms used in the safety data sheet

Full texts for Hazard Class and Category Code mentioned in section 3

<i>No tox haz</i>	Not classified as toxic
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<i>No phys haz</i>	Non-assigned physical hazard
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<i>No environmental hazard</i>	Not classified as being environmentally hazardous
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Explanations of the abbreviations in Section 14

ADR European Agreement concerning the International Transport of Dangerous Goods by Road

RID Regulations concerning the International Transport of Dangerous Goods by Rail

IMDG International Maritime Dangerous Goods Code

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

16c. Key literature references and sources for data

Sources for data

Primary data for the calculation of the hazards has preferentially been taken from the official European classification list, 1272/2008 Annex I, as updated to 2015-06-05.

Where such data was lacking, on the second hand the documentation on which this official classification is based was used, e.g. IUCLID (International Uniform Chemical Information Database). On the third hand, information was used from reputable international chemical suppliers, and on the fourth hand from other available information, e.g. safety data sheets from other suppliers or information from non-profit associations, whereby the reliability of the source was judged by an expert. If, in spite of this, reliable information was not found, the hazards were judged by expert opinions based on the known properties of similar substances, and according to the principles in 1907/2006 and 1272/2008.

Full texts for Regulations mentioned in this Safety Data Sheet

- 453/2010 COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
- 1272/2008 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
- 89/391 COUNCIL DIRECTIVE (89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work
- 1907/2006 REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC Annex I
- 98/24 COUNCIL DIRECTIVE 98/24/EC of 7 April 1998 on the protection of the health and safety of workers from the risks related to chemical agents at work (fourteenth individual Directive within the meaning of Article 16(1) of Directive 89/391/EEC)

16d. Methods of evaluating information referred to in 1272/2008 Article 9 which was used for the purpose of classification

The calculation of the hazards of this mixture has been performed as an evaluation by applying a weight of evidence determination using expert judgement in accordance with 1272/2008 Annex I, weighing all available information having a bearing on the determination of the hazards of the mixture, and in accordance with 1907/2006 Annex XI.

16e. List of relevant hazard statements and/or precautionary statements

H300	Fatal if swallowed.
H330	Fatal if inhaled.
H312	Harmful in contact with skin.
H319	Causes serious eye irritation.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.

16f. Advice on any training appropriate for workers to ensure protection of human health and the environment

Warning for misuse

This product can cause injuries if used improperly. Read and follow carefully the instructions in this safety sheet and other appropriate risk information. At professional use the employer is responsible for the staff being well aware of the risks.

Other relevant information