

1 Identification of substance**Product details**

Trade name

(S)-(+)-3-Chloro-1,2-propanediol

Stock number:

L18556

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG
Benzstrasse 3
D-76185 Karlsruhe / GermanyE-mail: gcat@matthey.com
www.alfa-chemcat.com

Informing department:

Product safety department.

Emergency information:

Giftnotruf Universität Mainz / Poison Information Center Mainz
www.giftinfo.uni-mainz.de Telefon:+49(0)6131/19240**2 Hazards identification**

Hazard designation:



T Toxic

Information pertaining to particular dangers for man and environment

R 60 May impair fertility.
 R 21 Also harmful in contact with skin.
 R 23/25 Also toxic by inhalation and if swallowed.
 R 37/38 Irritating to respiratory system and skin.
 R 41 Risk of serious damage to eyes.
 R 68 Possible risk of irreversible effects.

GHS label elements

**Danger**

H301 - Toxic if swallowed.
 H330 - Fatal if inhaled.

**Danger**

H360 - May damage fertility or the unborn child.
 H341 - Suspected of causing genetic defects.

**Danger**

H318 - Causes serious eye damage.

Warning

H312 - Harmful in contact with skin.
 H315 - Causes skin irritation.
 H335 - May cause respiratory irritation.

Prevention:

Response:

P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 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. Continue rinsing.
 P320 Specific treatment is urgent (see on this label).

Storage:

Disposal:

P405 Store locked up.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

3 Composition/information on ingredients

Chemical characterization:

Designation: (CAS#)

(S)-(+)-3-Chloro-1,2-propanediol (CAS# 57090-45-6): 100%

Identification number(s):

ELINCS Number:

435-560-9

4 First aid measures

General information

Instantly remove any clothing soiled by the product.

After inhalation

In case of irregular breathing or respiratory arrest provide artificial respiration.
 Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact

Seek immediate medical advice.
 Instantly wash with water and soap and rinse thoroughly.

After eye contact

Seek immediate medical advice.
 Rinse opened eye for several minutes under running water. Then consult doctor.

After swallowing

Do not induce vomiting; instantly call for medical help.
 Seek immediate medical advice.

5 Fire fighting measures

Suitable extinguishing agents
 Special hazards caused by the material, its products of combustion or flue gases:

CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

Protective equipment:

Can be released in case of fire:
 Carbon monoxide and carbon dioxide
 Hydrogen chloride (HCl)
 Wear self-contained breathing apparatus.
 Wear full protective suit.

6 Accidental release measures

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.
 Ensure adequate ventilation

Measures for environmental protection:

Measures for cleaning/collecting:

Do not allow material to be released to the environment without proper governmental permits.
 Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
 Dispose of contaminated material as waste according to item 13.
 Ensure adequate ventilation.

Additional information:

See Section 7 for information on safe handling
 See section 8 for information on personal protection equipment.
 See Section 13 for information on disposal.

7 Handling and storage

Handling

Information for safe handling:

Keep containers tightly sealed.
 Store in cool, dry place in tightly closed containers.
 Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.

Safety Data Sheet
according to 1907/2006/EC, Article 31

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Storage Requirements to be met by storerooms and containers: No special requirements.

Information about storage in one common storage facility: Store away from oxidizing agents.

Further information about storage conditions: Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.
Store in a locked cabinet or with access restricted to technical experts or their assistants.

8 Exposure controls and personal protection

Additional information about design of technical systems: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Components with critical values that require monitoring at the workplace: Not required.

Additional information: No data

Personal protective equipment
General protective and hygienic measures The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.
Instantly remove any soiled and impregnated garments.
Wash hands during breaks and at the end of the work.
Avoid contact with the skin.
Avoid contact with the eyes and skin.
Use breathing protection with high concentrations.

Breathing equipment: Check protective gloves prior to each use for their proper condition.

Protection of hands: The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Material of gloves Safety glasses
Face protection

Eye protection: Protective work clothing.

Body protection:

9 Physical and chemical properties:**General Information**

Form: Viscous liquid
Colour: Colourless
Yellow
Smell: Not determined

Change in condition
Melting point/Melting range: Not determined
Boiling point/Boiling range: 213°C
Sublimation temperature / start: Not determined

Flash point: 126°C

Ignition temperature: Not determined

Decomposition temperature: Not determined

Danger of explosion: Product is not explosive.

Critical values for explosion:
Lower: Not determined
Upper: Not determined

Steam pressure: Not determined

Density at 20°C 1.322 g/cm³

Solubility in / Miscibility with Water: Fully miscible

10 Stability and reactivity

Thermal decomposition / conditions to be avoided: No decomposition if used and stored according to specifications.

Materials to be avoided: Oxidizing agents

Dangerous reactions: No dangerous reactions known

Dangerous products of decomposition: Carbon monoxide and carbon dioxide
Hydrogen chloride (HCl)

11 Toxicological information

Acute toxicity:

Primary irritant effect:
on the skin: Irritant for skin and mucous membranes.
on the eye: Strong irritant with the danger of severe eye injury.
Irritant effect.

Sensitization: No sensitizing effect known.

Additional toxicological information: To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.
Danger by skin resorption.
Possible risk of impaired fertility.
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information:

Additional ecological information:

General notes: Do not allow product to reach ground water, water bodies or sewage system.
Water hazard class 2 (Self-assessment): hazardous for water.
Danger to drinking water if even small quantities leak into soil.
Do not allow material to be released to the environment without proper governmental permits.

13 Disposal considerations

Product:

Recommendation Consult state, local or national regulations for proper disposal.
Hand over to disposers of hazardous waste.

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GB

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Must be specially treated under adherence to official regulations.

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Uncleaned packagings:**Recommendation:****Recommended cleaning agent:**

Disposal must be made according to official regulations.

Water, if necessary with cleaning agent.

14 Transport information**Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)**

ADR/RID-GGVS/E Class: 6.1 (T1) Toxic substances.
Kemler Number: 60
UN-Number: 2689
Packaging group: III
Label: 6.1
Designation of goods: 2689 GLYCEROL ALPHA-MONOCHLOROXYDRIN
Limited quantities (LQ): LQ7
Transport category: 2
Tunnel restriction code: E

Maritime transport IMDG/GGVSea:

IMDG/GGVSea Class: 6.1
UN Number: 2689
Label: 6.1
Packaging group: III
Marine pollutant: No
Correct technical name: GLYCEROL ALPHA-MONOCHLOROXYDRIN

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: 6.1
UN/ID Number: 2689
Label: 6.1
Packaging group: III
Correct technical name: GLYCEROL ALPHA-MONOCHLOROXYDRIN

UN "Model Regulation":

UN2689, GLYCEROL ALPHA-MONOCHLOROXYDRIN, 6.1, III

15 Regulatory information**Designation according to EC guidelines:****Code letter and hazard designation of product:**

T Toxic

Risk phrases:

60 May impair fertility.
 21 Also harmful in contact with skin.
 23/25 Also toxic by inhalation and if swallowed.
 37/38 Irritating to respiratory system and skin.
 41 Risk of serious damage to eyes.
 68 Possible risk of irreversible effects.

Safety phrases:

53 Avoid exposure - obtain special instructions before use.
 4 Keep away from living quarters.
 9 Keep container in a well-ventilated place.
 20 When using do not eat or drink.
 23 Do not breathe gas/fumes/vapour/spray (appropriate wording to be specified by the manufacturer).
 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

National regulations**Information about limitation of use:**

Employment restrictions concerning young persons must be observed.
 For use only by technically qualified individuals.

Water hazard class:

Water hazard class 2 (Self-assessment): hazardous for water.

16 Other information:

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

Department issuing data specification sheet: Health, Safety and Environmental Department.**Contact:****Abbreviations and acronyms:**

Zachariah Holt
 ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 IMDG: International Maritime Code for Dangerous Goods
 IATA: International Air Transport Association
 IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
 ICAO: International Civil Aviation Organization
 ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
 GHS: Globally Harmonized System of Classification and Labelling of Chemicals
 EINECS: European Inventory of Existing Commercial Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)