

1 Identification of substance

Product details

Trade name

Stock number:

Manufacturer/Supplier:

Chloroacetic acid

A11482, L12661

Alfa Aesar GmbH & Co.KG
 Benzstrasse 3
 D-76185 Karlsruhe / Germany

E-mail: gcat@matthey.com
 www.alfa-chemcat.com

**Informing department:
 Emergency information:**

Product safety department.
 Giftnotruf Universität Mainz / Poison Information Center Mainz
 www.giftinfo.uni-mainz.de Telefon:+49(0)6131/19240

2 Hazards identification

Hazard designation:



T Toxic
 N Dangerous for the environment

Information pertaining to particular dangers for man and environment

R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
 R 34 Causes burns.
 R 50 Very toxic to aquatic organisms.

GHS label elements



Danger

H301 - Toxic if swallowed.
 H311 - Toxic in contact with skin.
 H331 - Toxic if inhaled.



Danger

H314 - Causes severe skin burns and eye damage.



Warning

H400 - Very toxic to aquatic life.

Prevention:

P273 Avoid release to the environment.

Response:

P280 Wear protective gloves/protective clothing/eye protection/face protection.
 P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER or doctor/physician.
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Disposal:

3 Composition/information on ingredients

Chemical characterization:

Designation: (CAS#)

Chloroacetic acid (CAS# 79-11-8)

Identification number(s):

EINECS Number:

201-178-4

Index number:

607-003-00-1

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:
 Hydrogen chloride (HCl)
 Carbon monoxide and carbon dioxide
 Wear self-contained breathing apparatus.
 Wear full protective suit.

6 Accidental release measures

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.

Measures for environmental protection:

Ensure adequate ventilation. Do not allow material to be released to the environment without proper governmental permits.

Measures for cleaning/collecting:

Use neutralizing agent. 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:

No special measures required.

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.
 Store away from strong bases.
 Store away from water.

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Further information about storage conditions:

Protect from humidity and keep away from water.
This product is hygroscopic.
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:

Chloroacetic acid
ppm
Finland 1-Ceiling (skin)
Ireland TWA 0.3 (skin)
Netherlands TWA 1 (skin)
Poland TWA 2 mg/m³; 4 mg/m³-STEL
Russia TWA 1 mg/m³-STEL
Sweden TWA 1; 2-STEL (skin)
United Kingdom TWA 0.3 (skin)

Components with critical values that require monitoring at the workplace:**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 eyes and skin.

Breathing equipment:**Eye protection:**

Use breathing protection with high concentrations.
Safety glasses
Tightly sealed safety glasses.

Body protection:

Full face protection
Face protection
Protective work clothing.

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

Form: Scales
Crystalline powder
Colour: White
Smell: Pungent

Change in condition

Melting point/Melting range: 60-63°C
Boiling point/Boiling range: 189°C
Sublimation temperature / start: Not determined

Flash point: 126°C

Ignition temperature: 470°C

Decomposition temperature: Not determined

Danger of explosion: Product is not explosive.

Critical values for explosion:

Lower: 8 Vol %
Upper: Not determined

Steam pressure at 20°C: 0.2 hPa

Density at 20°C 1.404 g/cm³

Solubility in / Miscibility with Water at 20°C: 4210 g/l

pH-value (800 g/l) at 20°C: <1

10 Stability and reactivity**Thermal decomposition / conditions to be avoided:****Materials to be avoided:**

No decomposition if used and stored according to specifications.
Oxidizing agents
Bases
Water/moisture
No dangerous reactions known
Dangerous products of decomposition: Hydrogen chloride (HCl)
Carbon monoxide and carbon dioxide
Phosgen

Dangerous reactions:**Dangerous products of decomposition:****11 Toxicological information****Acute toxicity:****LD/LC50 values that are relevant for classification:**

Oral	LD50	90.4 mg/kg (rat) (external SDS)
Dermal	LD50	305 mg/kg (rat) (external SDS)
Inhalative	LC50/1H	250 mg/m ³ /1H (rat) (IUCLID datasheet)
Irritation of skin	severe	unknown mg (rabbit) (external SDS)

Primary irritant effect:**on the skin:**

Corrosive effect on skin and mucous membranes.

on the eye:

Strong corrosive 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.
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

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The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this product.
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12 Ecological information:**Ecotoxicological effects:****Remark:**

Very toxic for fish

Additional ecological information:**General notes:**

Water danger class 3 (Self-assessment): extremely hazardous for water.
Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into soil.
Also poisonous for fish and plankton in water bodies.
Do not allow material to be released to the environment without proper governmental permits.
Very toxic for aquatic organisms
Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values. A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

13 Disposal considerations**Product:****Recommendation**

Consult state, local or national regulations for proper disposal.
Hand over to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.

Uncleaned packagings:**Recommendation:**

Disposal must be made according to official regulations.

Recommended cleaning agent:

Water, if necessary with cleaning agent.

14 Transport information

and transport ADR/RID and GGVS/GGVE (cross-border/domestic)

**ADR/RID-GGVS/E Class:**

6.1 (TC2) Toxic substances,

Kemler Number:

68

UN-Number:

1751

Packaging group:

II

Label

6.1+8

Special marking:

Symbol (fish and tree)

Designation of goods:

1751 CHLOROACETIC ACID, SOLID

Limited quantities (LQ)

LQ18

Transport category

2

Tunnel restriction code

D/E

Maritime transport IMDG/GGVSea:**IMDG/GGVSea Class:**

6.1

UN Number:

1751

Label

6.1+8

Packaging group:

II

Marine pollutant:

Yes (P)

Segregation groups

Symbol (fish and tree)

Correct technical name:Acids
CHLOROACETIC ACID, SOLID**Air transport ICAO-TI and IATA-DGR:****ICAO/IATA Class:**

6.1

UN/ID Number:

1751

Label

6.1+8

Packaging group:

II

Correct technical name:

CHLOROACETIC ACID, SOLID

UN "Model Regulation":

UN1751, CHLOROACETIC ACID, SOLID, 6.1 (8), II

Environmental hazards:

Environmentally hazardous substance, solid; Marine Pollutant

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

T Toxic

N Dangerous for the environment

Risk phrases:

23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

34 Causes burns.

50 Very toxic to aquatic organisms.

Safety phrases:

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).

61 Avoid release to the environment. Refer to special instructions/safety data sheets.

63 In case of accident by inhalation: remove casualty to fresh air and keep at rest.

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 danger class 3 (Self-assessment): extremely hazardous for water.

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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:** Zachariah Holt**Abbreviations and acronyms:**

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)
P: Marine Pollutant
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)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent

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