

## Chemical Safety Data Sheet MSDS / SDS

## Chloroacetamide

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

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

## Product identifier

Product name : Chloroacetamide  
CBnumber : CB5691957  
CAS : 79-07-2  
EINECS Number : 201-174-2  
Synonyms : 2-chloroacetamide,Chloroacetamide

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

Relevant identified uses : For R&D use only. Not for medicinal, household or other use.  
Uses advised against : none

## Company Identification

Company : Chemicalbook  
Address : Building 1, Huihuang International, Shangdi 10th Street, Haidian District, Beijing  
Telephone : 400-158-6606

## SECTION 2: Hazards identification

## Classification of the substance or mixture

Acute toxicity - Category 3, Oral  
Skin sensitization, Category 1  
Reproductive toxicity, Category 2

## Label elements

## Pictogram(s)

☐☐☐

Signal word : Danger

## Hazard statement(s)

H301 Toxic if swallowed  
H317 May cause an allergic skin reaction  
H361 Suspected of damaging fertility or the unborn child  
H402 Harmful to aquatic life

## 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 thoroughly after handling.

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

P272 Contaminated work clothing should not be allowed out of the workplace.

P273 Avoid release to the environment.

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

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

P333+P313 IF SKIN irritation or rash occurs: 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.

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

P272 Contaminated work clothing should not be allowed out of the workplace.

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

P203 Obtain, read and follow all safety instructions before use.

#### **Response**

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

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

P330 Rinse mouth.

P302+P352 IF ON SKIN: Wash with plenty of water/...

P333+P317 If skin irritation or rash occurs: Get medical help.

P362+P364 Take off contaminated clothing and wash it before reuse.

P318 IF exposed or concerned, get medical advice.

#### **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

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## SECTION 3: Composition/information on ingredients

### **Substance**

Product name : Chloroacetamide

Synonyms : 2-chloroacetamide,Chloroacetamide

CAS : 79-07-2

EC number : 201-174-2  
MF : C2H4ClNO  
MW : 93.51

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## SECTION 4: First aid measures

### Description of first aid measures

#### If inhaled

Fresh air, rest.

#### Following skin contact

Remove contaminated clothes. Rinse and then wash skin with water and soap.

#### Following eye contact

Rinse with plenty of water for several minutes (remove contact lenses if easily possible).

#### Following ingestion

Rinse mouth. Give a slurry of activated charcoal in water to drink. Refer for medical attention .

### Most important symptoms and effects, both acute and delayed

no data available

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

Immediate first aid: Ensure that adequate decontamination has been carried out. If patient is not breathing, start artificial respiration, preferably with a demand valve resuscitator, bag-valve-mask device, or pocket mask, as trained. Perform CPR if necessary. Immediately flush contaminated eyes with gently flowing water. Do not induce vomiting. If vomiting occurs, lean patient forward or place on the left side (head-down position, if possible) to maintain an open airway and prevent aspiration. Keep patient quiet and maintain normal body temperature.

Obtain medical attention. Poisons A and B

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## SECTION 5: Firefighting measures

### Extinguishing media

In case of fire in the surroundings, use appropriate extinguishing media.

### Specific Hazards Arising from the Chemical

Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.

### Advice for firefighters

In case of fire in the surroundings, use appropriate extinguishing media.

### NFPA 704





- HEALTH 2 Intense or continued but not chronic exposure could cause temporary incapacitation or possible residual injury (e.g. [diethyl ether](#), ammonium phosphate, iodine)
- 
- Materials that require considerable preheating, under all ambient temperature conditions, before ignition and combustion
- FIRE 1 can occur. Includes some finely divided suspended solids that do not require heating before ignition can occur. Flash point at or above 93.3 °C (200 °F). (e.g. [mineral oil](#), ammonia)
- 
- REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N2](#))
- 
- SPEC.
- HAZ.
- 

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Sweep spilled substance into covered sealable containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

### Environmental precautions

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Sweep spilled substance into covered sealable containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

### Methods and materials for containment and cleaning up

Spillage Disposal. Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Sweep spilled substance into covered sealable containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local 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

Separated from strong oxidants, strong bases, strong acids and food and feedstuffs. Ventilation along the floor. Store in an area without drain or sewer access. Separated from strong oxidants, strong bases, strong acids and food and feedstuffs. Ventilation along the floor. Store in an area without drain or sewer access.

## SECTION 8: Exposure controls/personal protection

## Control parameters

### Occupational Exposure limit values

MAK skin absorption (H); MAK sensitization of skin (SH)

### 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 risk-elimination area.

## Individual protection measures

### Eye/face protection

Wear safety spectacles, face shield or eye protection in combination with breathing protection if powder.

### Skin protection

Protective gloves. Protective clothing.

### Respiratory protection

Use local exhaust or breathing protection.

### Thermal hazards

no data available

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Physical state	Crystalline Powder
Colour	White
Odour	Characteristic odour
Melting point/freezing point	118.4 °C. Remarks:Standard deviation: 0.1°C.
Boiling point or initial boiling point and boiling range	Atm. press.:1 013.25 hPa. Remarks:No boiling point at atmospheric pressure because of decomposition.
Flammability	Not combustible. Gives off irritating or toxic fumes (or gases) in a fire.
Lower and upper explosion limit/flammability limit	no data available
Flash point	60°C(lit.)
Auto-ignition temperature	no data available
Decomposition temperature	225°C
pH	3.8-4.1 (40g/l, H <sub>2</sub> O, 20°C)
Kinematic viscosity	no data available
Solubility	methanol: soluble1g/10 mL
Partition coefficient n-octanol/water	log Pow = -0.63. Temperature:24.4 °C.;Pow = 0.233. Temperature:24.4 °C.
Vapour pressure	0.05 mm Hg ( 20 °C)
Density and/or relative density	1.584. Temperature:20 °C.
Relative vapour density	(air = 1): 3.2

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Particle characteristics                      no data available

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## SECTION 10: Stability and reactivity

### Reactivity

Decomposes on heating. This produces toxic fumes including nitrogen oxides and chlorine. Reacts with strong oxidants, strong reducing agents, strong acids and strong bases.

### Chemical stability

Two isomorphous crystalline modifications: alpha-form, "stable form", obtained by sublimation and by crystallization from nonpolar solvents; beta-form, "unstable form", obtained by quenching the melt or by crystallization from polar solvents .

### Possibility of hazardous reactions

Not combustible.

### Conditions to avoid

no data available

### Incompatible materials

Reacts with strong oxidants, strong reducing agents, strong acids and strong bases.

### Hazardous decomposition products

Decomposes on heating. This produces toxic fumes including nitrogen oxides and chlorine.

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## SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 - rat (female) - 138 mg/kg bw.
- Inhalation: no data available
- Dermal: LD50 - rat (male/female) - > 2 000 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**

The substance is irritating to the eyes and skin.

### **STOT-repeated exposure**

Repeated or prolonged contact may cause skin sensitization. Animal tests show that this substance possibly causes toxicity to human reproduction or development.

### **Aspiration hazard**

A harmful concentration of airborne particles can be reached quickly when dispersed, especially if powdered.

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## SECTION 12: Ecological information

### **Toxicity**

Toxicity to fish: LC50 - *Leuciscus idus melanotus* - 19.8 mg/L - 96 h.

Toxicity to daphnia and other aquatic invertebrates: EC50 - *Daphnia magna* - 14 mg/L - 48 h.

Toxicity to algae: EC10 - *Desmodesmus subspicatus* (previous name: *Scenedesmus subspicatus*) - 1.67 mg/L - 48 h.

Toxicity to microorganisms: EC50 - activated sludge, domestic - 1 174 mg/L - 3 h. Remarks:Respiration rate.

### **Persistence and degradability**

AEROBIC: Chloroacetamide underwent greater than 90% biodegradation in 6 days using an activated sludge inoculum and the Zahn-Wellens test(1).

### **Bioaccumulative potential**

An estimated BCF of 3 was calculated in fish for chloroacetamide(SRC), using a log Kow of 0.53(1) and a regression-derived equation(2).

According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is low(SRC).

### **Mobility in soil**

The Koc of chloroacetamide is estimated as 4.2(SRC), using a log Kow of -0.53(1) and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that chloroacetamide is expected to have very high mobility in soil.

### **Other adverse effects**

no data available

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## 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.

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## SECTION 14: Transport information

### **UN Number**

ADR/RID: UN2811 (For reference only, please check.)

IMDG: UN2811 (For reference only, please check.)

IATA: UN2811 (For reference only, please check.)

### **UN Proper Shipping Name**

ADR/RID: TOXIC SOLID, ORGANIC, N.O.S. (For reference only, please check.)

IMDG: TOXIC SOLID, ORGANIC, N.O.S. (For reference only, please check.)

IATA: TOXIC SOLID, ORGANIC, N.O.S. (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: I (For reference only, please check.)

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

IATA: I (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

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## 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**

Not Listed.

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

Listed.

#### **PICCS**

Listed.

#### **Vietnam National Chemical Inventory**

Listed.

#### **IECSC**

Listed.

#### **Korea Existing Chemicals List (KECL)**

Listed.

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## 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/>

## Other Information

Do NOT take working clothes home.

### **Disclaimer:**

The information in this MSDS is only applicable to the specified product, unless otherwise specified, it is not applicable to the mixture of this product and other substances. This MSDS only provides information on the safety of the product for those who have received the appropriate professional training for the user of the product. Users of this MSDS must make independent judgments on the applicability of this SDS. The authors of this MSDS will not be held responsible for any harm caused by the use of this MSDS.