

## Chemical Safety Data Sheet MSDS / SDS

## Propiolic Acid

Revision Date:2026-03-21 Revision Number:1

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

## Product identifier

Product name : Propiolic Acid  
CBnumber : CB8195906  
CAS : 471-25-0  
EINECS Number : 207-437-8  
Synonyms : Propynoate

## 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 : 010-86108875

## SECTION 2: Hazards identification

## GHS Label elements, including precautionary statements

Symbol(GHS)



Signal word

Danger

## Precautionary statements

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P233 Keep container tightly closed.

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.

Continuerinsing.

## Hazard statements

H226 Flammable liquid and vapour

H301 Toxic if swallowed

H310 Fatal in contact with skin

## SECTION 3: Composition/information on ingredients

### Substance

Product name	: Propiolic Acid
Synonyms	: Propynoate
CAS	: 471-25-0
EC number	: 207-437-8
MF	: C <sub>3</sub> H <sub>2</sub> O <sub>2</sub>
MW	: 70.05

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## SECTION 4: First aid measures

### General advice

First aiders need to protect themselves. Show this material safety data sheet to the doctor in attendance.

### If inhaled

After inhalation: fresh air. Call in physician.

### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower. Call a physician immediately.

### In case of eye contact

After eye contact: rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.

### If swallowed

If swallowed: give water to drink (two glasses at most). Seek medical advice immediately. In exceptional cases only, if medical care is not available within one hour, induce vomiting (only in persons who are wide awake and fully conscious), administer activated charcoal (20 - 40 g in a 10% slurry) and consult a doctor as quickly as possible. Do not attempt to neutralise.

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

The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11

### Protection of first-aiders

For personal protection see section 8.

### Notes to physician

No data available

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## SECTION 5: Firefighting measures

## Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

## Specific hazards during fire fighting

Vapors are heavier than air and may spread along floors. Forms explosive mixtures with air at elevated temperatures.

## Hazardous combustion products

Carbon oxides

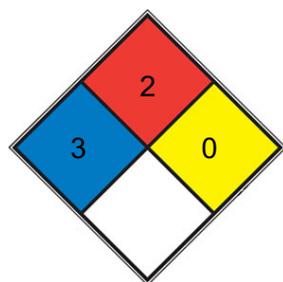
## Specific extinguishing methods

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## Special protective equipment for fire-fighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

## NFPA 704



HEALTH 3 Short exposure could cause serious temporary or moderate residual injury (e.g. [liquid hydrogen](#), [sulfuric acid](#), [calcium hypochlorite](#), hexafluorosilicic acid)

FIRE 2 Must be moderately heated or exposed to relatively high ambient temperature before ignition can occur and multiple finely divided suspended solids that do not require heating before ignition can occur. Flash point between 37.8 and 93.3 °C (100 and 200 °F). (e.g. diesel fuel, [sulfur](#))

REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N<sub>2</sub>](#))

SPEC.

HAZ.

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## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. Advice for emergency responders: For personal protection see section 8.

### Environmental precautions

Do not let product enter drains. Risk of explosion.

## Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up carefully with liquid-absorbent material. Dispose of properly. Clean up affected area.

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## SECTION 7: Handling and storage

### Handling

#### Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

#### Avoidance of contact

Bases Oxidizing agents Reducing agents

### Storage

#### Further information on storage conditions

Keep container tightly closed in a dry and wellventilated place. Keep away from heat and sources of ignition. Keep locked up or in an area accessible only to qualified or authorized persons.

#### Storage class

3, Flammable liquids

#### Recommended storage temperature

2 - 8 °C

#### Packaging material

Suitable material: Poly Drum

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## SECTION 8: Exposure controls/personal protection

### Ingredients with workplace control parameters

Contains no substances with occupational exposure limit values.

### Engineering measures

No data available

### Personal protective equipment

#### Respiratory protection

required when vapours/aerosols are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

#### Recommended Filter type

Filter type ABEK

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

#### Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Tightly fitting safety goggles

#### **Skin and body protection**

Flame retardant antistatic protective clothing.

#### **Hand protection**

#### **Remarks**

required

#### **Hygiene measures**

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

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## SECTION 9: Physical and chemical properties

### **Information on basic physicochemical properties**

clear, liquid

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#### **Color**

dark yellow

#### **Odor**

No data available

#### **Odor Threshold**

No data available

#### **pH**

No data available

#### **Melting point/ range**

16 - 18 °C

Method: lit.

#### **Boiling point/boiling range**

102 °C (267 hPa)

Method: lit.

#### **Flash point**

58 °C

Method: closed cup

#### **Evaporation rate**

No data available

#### **Flammability (solid, gas)**

No data available

**Flammability (liquids)**

No data available

**Burning rate**

No data available

**Upper explosion limit / Upper flammability limit**

No data available

**Lower explosion limit / Lower flammability limit**

No data available

**Vapor pressure**

No data available

**Relative vapor density**

No data available

**Relative density**

1.138 g/mL at 25 °C (lit.)

**Density**

1.138 g/cm<sup>3</sup> (25 °C)

Method: lit.

**Water solubility**

miscible

**Partition coefficient: n-octanol/water**

No data available

**Autoignition temperature**

No data available

**Decomposition temperature**

No data available

**Viscosity, dynamic**

No data available

**Viscosity, kinematic**

No data available

**Flow time**

No data available

**Explosive properties**

No data available

### **Oxidizing properties**

No data available

### **Molecular weight**

70.05 g/mol

### **Particle characteristics Particle size**

No data available

### **Solubility**

Chloroform (Soluble), Methanol (Soluble)

### **Physical state**

Liquid After Melting

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## SECTION 10: Stability and reactivity

### **Reactivity**

Vapor/air-mixtures are explosive at intense warming.

### **Chemical stability**

The product is chemically stable under standard ambient conditions (room temperature) .

### **Possibility of hazardous reactions**

No data available

### **Conditions to avoid**

Heating.

### **Incompatible materials**

Bases Oxidizing agents Reducing agents

### **Hazardous decomposition products**

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### **11.1 Information on toxicological effects**

#### **Acute toxicity**

Acute toxicity estimate Oral - 100 mg/kg (Calculation method)

LD50 Oral - Rat - 100 mg/kg

Remarks: (RTECS)

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:., damage of respiratory tract

Acute toxicity estimate Dermal - 100 mg/kg (Calculation method)

LD50 Dermal - Guinea pig - 100 mg/kg

Remarks: (RTECS)

#### **Skin corrosion/irritation**

Remarks: Causes skin burns.

(ECHA)

#### **Serious eye damage/eye irritation**

Remarks: Causes serious eye damage.

#### **Respiratory or skin sensitization**

Classified based on available data. For more details, see section 2

#### **Germ cell mutagenicity**

Classified based on available data. For more details, see section 2

#### **Carcinogenicity**

Classified based on available data. For more details, see section 2

#### **Reproductive toxicity**

Classified based on available data. For more details, see section 2

#### **Specific target organ toxicity - single exposure**

Classified based on available data. For more details, see section 2

#### **Specific target organ toxicity - repeated exposure**

Classified based on available data. For more details, see section 2

#### **Aspiration hazard**

Classified based on available data. For more details, see section 2

### **11.2 Additional Information**

RTECS: UD9300000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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## **SECTION 12: Ecological information**

### **Ecotoxicity**

No data available

### **Persistence and degradability**

No data available

### **Bioaccumulative potential**

No data available

## Mobility in soil

No data available

## Other adverse effects

## Components:

## Acetylenemonocarboxylic acid:

## Additional ecological information

Discharge into the environment must be avoided.

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# SECTION 13: Disposal considerations

## Disposal methods

### Waste from residues

Offer surplus and non-recyclable solutions to a licensed disposal company.

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# SECTION 14: Transport information

## International Regulations

### IATA-DGR

UNID No. : UN 2920

Proper shipping name : Corrosive liquid, flammable, n.o.s.

(Acetylenemonocarboxylic acid)

Class : 8

Subsidiary risk : 3

Packing group : II

Labels : Class 8 - Corrosive substances, Class 3 - Flammable liquids

Packing instruction (cargo aircraft) : 855

Packing instruction (passenger aircraft) : 851

### IMDG-Code

UN number : UN 2920

Proper shipping name : CORROSIVE LIQUID, FLAMMABLE, N.O.S.

(Acetylenemonocarboxylic acid)

Class : 8

Subsidiary risk : 3

Packing group : II

Labels : 8 (3)

EmS Code : F-E, S-C

Marine pollutant : no

## Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

National regulation GB 6944/12268

UN number : UN 2920

Proper shipping name : CORROSIVE LIQUID, FLAMMABLE, N.O.S.

(Acetylenemonocarboxylic acid)

Class : 8

Subsidiary risk : 3

Packing group : II

Labels : 8 (3)

### Special precautions for user

The transport classification(s) provided herein are for informational purposes only, and solely based upon the properties of the unpackaged material as it is described within this Safety Data Sheet. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

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## SECTION 15: Regulatory information

Downstream users need to comply with the conditions of safe use of the chemical, understand the environmental and health hazard and risk management measures identified on the SDS as well as the local/national regulations concerning the chemical.

### National regulatory information

#### Regulations on Safety Management of Hazardous Chemicals

##### Catalogue of Hazardous Chemicals

Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218)

##### No. / Code Chemical name / Category Threshold quantity

**J5 Acute toxic 500 t**

**W5.4 Flammable liquids 5,000 t**

##### Hazardous Chemicals for Priority Management

Not listed under SAWS

##### Regulations on Occupational Labor Protection in the at workplaces where

##### Toxic Substances Are Used

##### Catalogue of Highly Toxic Chemicals

Not listed

##### Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

## China Severely Restricted Toxic Chemicals for Import and Export

Not listed

## Measures on the Environmental Administration of New Chemical Substances Registration

### Registration/Notification number

B1A222232991

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## SECTION 16: Other information

### Full text of other abbreviations

AIIIC - Australian Inventory of Industrial Chemicals

ANTT - National Agency for Transport by Land of Brazil

ASTM - American Society for the Testing of Materials

bw - Body weight

CMR - Carcinogen, Mutagen or Reproductive Toxicant

DIN - Standard of the German Institute for Standardisation

DSL - Domestic Substances List (Canada)

EC<sub>x</sub> - Concentration associated with x% response

EL<sub>x</sub> - Loading rate associated with x% response

EmS - Emergency Schedule

ENCS - Existing and New Chemical Substances (Japan)

ErC<sub>x</sub> - Concentration associated with x% growth rate response

ERG - Emergency Response Guide

GHS - Globally Harmonized System

GLP - Good Laboratory Practice

IARC - International Agency for Research on Cancer

IATA - International Air Transport Association

IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk

IC<sub>50</sub> - Half maximal inhibitory concentration

ICAO - International Civil Aviation Organization

IECSC - Inventory of Existing Chemical Substances in China

IMDG - International Maritime Dangerous Goods

IMO - International Maritime Organization

ISHL - Industrial Safety and Health Law (Japan)

ISO - International Organisation for Standardization

KECI - Korea Existing Chemicals Inventory

LC<sub>50</sub> - Lethal Concentration to 50 % of a test population

LD<sub>50</sub> - Lethal Dose to 50% of a test population (Median Lethal Dose)

MARPOL - International Convention for the Prevention of Pollution from Ships

n.o.s. - Not Otherwise Specified

Nch - Chilean Norm

NO(A)EC - No Observed (Adverse) Effect Concentration  
NO(A)EL - No Observed (Adverse) Effect Level  
NOELR - No Observable Effect Loading Rate  
NOM - Official Mexican Norm  
NTP - National Toxicology Program  
NZIoC - New Zealand Inventory of Chemicals  
OECD - Organization for Economic Co-operation and Development  
OPPTS - Office of Chemical Safety and Pollution Prevention  
PBT - Persistent, Bioaccumulative and Toxic substance  
PICCS - Philippines Inventory of Chemicals and Chemical Substances  
(Q)SAR - (Quantitative) Structure Activity Relationship  
REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals  
SADT - Self-Accelerating Decomposition Temperature  
SDS - Safety Data Sheet  
TCSI - Taiwan Chemical Substance Inventory  
TDG - Transportation of Dangerous Goods  
TECI - Thailand Existing Chemicals Inventory  
TSCA - Toxic Substances Control Act (United States)  
UN - United Nations  
UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods  
vPvB - Very Persistent and Very Bioaccumulative  
WHMIS - Workplace Hazardous Materials Information System

**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.