

## Chemical Safety Data Sheet MSDS / SDS

## Propylamine

Revision Date:2023-12-02 Revision Number:1

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

## Product identifier

Product name : Propylamine  
CBnumber : CB8401908  
CAS : 107-10-8  
EINECS Number : 203-462-3  
Synonyms : PA,propylamine

## 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

## 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.

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

P273 Avoid release to the environment.

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.

P310 Immediately call a POISON CENTER or doctor/physician.

P405 Store locked up.

## Hazard statements

H225 Highly Flammable liquid and vapour  
H302 Harmful if swallowed  
H311 Toxic in contact with skin  
H314 Causes severe skin burns and eye damage  
H318 Causes serious eye damage  
H412 Harmful to aquatic life with long lasting effects

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## SECTION 3: Composition/information on ingredients

### Substance

Product name : Propylamine  
Synonyms : PA,propylamine  
CAS : 107-10-8  
EC number : 203-462-3  
MF : C<sub>3</sub>H<sub>9</sub>N  
MW : 59.11

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## SECTION 4: First aid measures

### Description of first aid measures

#### General advice

Consult a physician. Show this material safety data sheet to the doctor in attendance.

#### If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

#### If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

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

No data available

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## SECTION 5: Firefighting measures

### Extinguishing media

### Suitable extinguishing media

Dry powder Dry sand

### Unsuitable extinguishing media

Do NOT use water jet.

### Special hazards arising from the substance or mixture

Carbon oxides Nitrogen oxides (NOx) Combustible.

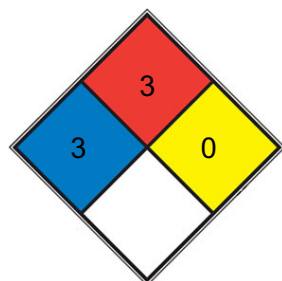
### Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### Further information

Use water spray to cool unopened containers.

### 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 3** Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions . Liquids having a flash point below 22.8 °C (73 °F) and having a boiling point at or above 37.8 °C (100 °F) or having a flash point between 22.8 and 37.8 °C (73 and 100 °F). (e.g. gasoline, [acetone](#))

**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

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

For personal protection see section 8.

### Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in

container for disposal according to local / national regulations (see section 13).

### **Reference to other sections**

For disposal see section 13.

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## **SECTION 7: Handling and storage**

### **Precautions for safe handling**

#### **Advice on safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

#### **Advice on protection against fire and explosion**

Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

#### **Hygiene measures**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

For precautions see section 2.2.

### **Conditions for safe storage, including any incompatibilities**

#### **Storage conditions**

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.

#### **Storage stability**

Recommended storage temperature 2 - 8 °C

Handle and open container with care. Moisture sensitive.

#### **Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## **SECTION 8: Exposure controls/personal protection**

### **control parameter**

#### **Hazard composition and occupational exposure limits**

Does not contain substances with occupational exposure limits.

#### **Exposure controls**

##### **Personal protective equipment**

###### **Eye/face protection**

Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

###### **Skin protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Splash contact

Material: Fluorinated rubber Minimum layer thickness: 0,7 mm Break through time: 61 min

Material tested: Vitoject? (KCL 890 / Aldrich Z677698, Size M)

data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 87300, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

#### Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

#### Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

#### Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

#### Exposure limits

No exposure limit has been set. Based on its similarity to ethylamine in irritation and toxicity, a TLV-TWA of 10 ppm ( $\sim 24 \text{ mg/m}^3$ ) should be appropriate. .

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Appearance	colorless clear, liquid
Odour	ammoniacal
Odour Threshold	0.061ppm
pH	12,6 at 100 g/l at 20 °C
Melting point/freezing point	Melting point/range: -83 °C - lit.
Initial boiling point and boiling range	48 °C - lit.
Flash point	< -35 °C
Evaporation rate	No data available
Flammability (solid, gas)	No data available
Upper/lower flammability or explosive limits	Upper explosion limit: 13,6 %(V) Lower explosion limit: 2,1 %(V)
Vapour pressure	330 hPa at ca.19,6 °C
Vapour density	2,04 - (Air = 1.0)
Relative density	0,72 at 20 °C

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Water solubility	at 20 °C miscible in all proportions
Partition coefficient: n-octanol/water	log Pow: 0,28 at 23 °C - Bioaccumulation is not expected.
Autoignition temperature	317 °C at 1.013 hPa does not ignite
Decomposition temperature	>300 °C -
Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
Explosive properties	No data available
Oxidizing properties	No data available

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### Other safety information

Solubility in other solvents

Acetone at 20 °C

soluble Benzene at 20 °C

soluble Chloroform at 20 °C

soluble

Dissociation constant 10,68 at 25 °C

Relative vapor density

2,04 - (Air = 1.0)

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## SECTION 10: Stability and reactivity

### Reactivity

No data available

### Chemical stability

Stable under recommended storage conditions.

### Possibility of hazardous reactions

No data available

### Conditions to avoid

Heat, flames and sparks.

### Incompatible materials

acids, Acid chlorides, Acid anhydrides, Strong oxidizing agents

### Hazardous decomposition products

In the event of fire: see section 5

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## SECTION 11: Toxicological information

### Information on toxicological effects

**Acute toxicity**

LD50 Oral - Rat - male and female - 370 mg/kg

(OECD Test Guideline 401)

LC50 Inhalation - Rat - male - 4 h - 6,32 mg/l (OECD Test Guideline 403)

LD50 Dermal - Rabbit - male - 403 mg/kg Remarks:

(ECHA)

**Skin corrosion/irritation**

Skin - Rabbit

Result: Corrosive - 24 h Remarks:

(ECHA)

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: Irreversible effects on the eye

(Draize Test)

Causes serious eye damage.

**Respiratory or skin sensitization Germ cell mutagenicity**

Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Ames test

Escherichia coli/Salmonella typhimurium Result: negative

OECD Test Guideline 474

Mouse - male and female - Red blood cells (erythrocytes) Result: negative

Remarks:

(in analogy to similar products)

**Carcinogenicity**

IARC: No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity**

No data available

**Specific target organ toxicity - single exposure**

May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure Aspiration hazard****Toxicity**

LD50 orally in rats: 0.57 g/kg (Smyth)

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## SECTION 12: Ecological information

**Toxicity****Toxicity to fish**

static test LC50 - Leuciscus idus (Golden orfe) - ca. 46 mg/l - 96 h (DIN 38412 part 15)

**Toxicity to daphnia and other aquatic invertebrates**

static test EC50 - Daphnia magna (Water flea) - 70,7 mg/l - 48 h (OECD Test Guideline 202)

**Toxicity to bacteria**

EC50 - Pseudomonas putida - 46 mg/l - 17 h

(DIN 38 412 Part 8)

### **Persistence and degradability**

Biodegradability aerobic - Exposure time 14 d

Result: 85 % - Readily biodegradable. (OECD Test Guideline 301C)

Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: 1-amino-n- butane

### **Bioaccumulative potential**

### **Mobility in soil**

### **Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

### **Other adverse effects**

Harmful to aquatic life.

Discharge into the environment must be avoided.

Neutralization will reduce ecotoxic effects. May be harmful to aquatic organisms due to the shift of the pH.

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## SECTION 13: Disposal considerations

### **Waste treatment methods**

#### **Product**

Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

#### **Incompatibilities**

Vapors may form explosive mixture with air. Violent reaction on contact with oxidizers and mercury, strong acids; organic anhydrides; isocyanates, aldehydes, nitroparaffins, halogenated hydrocarbons; alcohols and many other compounds. Attacks many metals and alloys, especially those of copper. Aqueous solution is acidic and may attack glass.

#### **Waste Disposal**

Consult with environmental regulatory agencies for guidance on acceptable disposal practices. Generators of waste containing this contaminant ( $\geq 100$  kg/mo) must conform with EPA regulations governing storage, transportation, treatment, and waste disposal.

#### **Contaminated packaging**

Dispose of as unused product.

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## SECTION 14: Transport information



**UN number**

ADR/RID: 1277 IMDG: 1277 IATA: 1277

**UN proper shipping name**

ADR/RID: PROPYLAMINE IMDG: PROPYLAMINE IATA: Propylamine

**Transport hazard class(es)**

ADR/RID: 3 (8) IMDG: 3 (8) IATA: 3 (8)

**Packaging group**

ADR/RID: II IMDG: II IATA: II

**Environmental hazards**

ADR/RID: no IMDG Marine pollutant: no IATA: no

**Special precautions for user**

No data available

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## SECTION 15: Regulatory information

**Safety, health and environmental regulations/legislation specific for the substance or mixture****Regulations on the Safety Management of Hazardous Chemicals**

China Catalog of Hazardous chemicals 2015:Listed. website: <https://www.mem.gov.cn/>

**Measures for Environmental Management of New Chemical Substances**

European Inventory of Existing Commercial Chemical Substances (EINECS):Listed. website: <https://echa.europa.eu/>

Philippines Inventory of Chemicals and Chemical Substances (PICCS):Listed. website: <https://emb.gov.ph/>

Chinese Chemical Inventory of Existing Chemical Substances (China IECSC):Listed. website: <https://www.mee.gov.cn/>

EC Inventory:Listed.

New Zealand Inventory of Chemicals (NZIoC):Listed. website: <https://www.epa.govt.nz/>

Korea Existing Chemicals List (KECL):Listed. website: <http://ncis.nier.go.kr>

Vietnam National Chemical Inventory:Listed. website: <https://chemicaldata.gov.vn/>

United States Toxic Substances Control Act (TSCA) Inventory:Listed. website: <https://www.epa.gov/>

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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

- 【1】 CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>
- 【2】 ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>
- 【3】 ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>
- 【4】 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)
- 【5】 ERG - Emergency Response Guidebook by U.S. Department of Transportation, website: <http://www.phmsa.dot.gov/hazmat/library/erg>
- 【6】 Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>
- 【7】 HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>
- 【8】 IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>
- 【9】 IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>
- 【10】 Sigma-Aldrich, website: <https://www.sigmaaldrich.com/>

## Other Information

Do NOT take working clothes home. The symptoms of lung oedema often do not become manifest until a few hours have passed and they are aggravated by physical effort. Rest and medical observation are therefore essential.

### 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.