

## Chemical Safety Data Sheet MSDS / SDS

## Dipropylamine

Revision Date:2025-01-06 Revision Number:1

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

**Product identifier**

Product name : Dipropylamine  
CBnumber : CB1713802  
CAS : 142-84-7  
EINECS Number : 205-565-9  
Synonyms : DPA,dipropylamine

**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**

Flammable liquids, Category 2  
Acute toxicity - Category 4, Oral  
Acute toxicity - Category 4, Dermal  
Skin corrosion, Sub-category 1A  
Acute toxicity - Category 4, Inhalation

**Label elements****Pictogram(s)**

□□□□

Signal word Danger

**Hazard statement(s)**

H225 Highly Flammable liquid and vapour  
H302 Harmful if swallowed  
H312 Harmful in contact with skin  
H314 Causes severe skin burns and eye damage

H332 Harmful if inhaled

H370 Causes damage to organs

H371 May cause damage to organs

**Precautionary statement(s)**

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

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

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.

P271 Use only outdoors or in a well-ventilated area.

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.

P307+P311 IF exposed: call a POISON CENTER or doctor/physician.

P370+P378 In case of fire: Use ... for extinction.

P405 Store locked up.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P501 Dispose of contents/container to.....

**Prevention**

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment.

P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.

P242 Use non-sparking tools.

P243 Take action to prevent static discharges.

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

P264 Wash ... thoroughly after handling.

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

P260 Do not breathe dust/fume/gas/mist/vapours/spray.

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

P271 Use only outdoors or in a well-ventilated area.

**Response**

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].

P370+P378 In case of fire: Use ... to extinguish.

P301+P317 IF SWALLOWED: Get medical help.

P330 Rinse mouth.

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

P317 Get medical help.

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

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

P301+P330+P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P363 Wash contaminated clothing before reuse.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P316 Get emergency medical help immediately.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### **Storage**

P403+P235 Store in a well-ventilated place. Keep cool.

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 | : Dipropylamine     |
| Synonyms     | : DPA,dipropylamine |
| CAS          | : 142-84-7          |
| EC number    | : 205-565-9         |
| MF           | : C6H15N            |
| MW           | : 101.19            |

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## SECTION 4: First aid measures

### **Description of first aid measures**

#### **If inhaled**

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately.

Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

#### **Following skin contact**

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

#### **Following eye contact**

Rinse with pure water for at least 15 minutes. Consult a doctor.

#### **Following ingestion**

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

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

Inhalation causes severe coughing and chest pain due to irritation of air passages; can-cause lung edema; may also cause headache, nausea, faintness, and anxiety. Ingestion causes irritation and burning of mouth and stomach. Contact with eyes causes severe irritation and edema of the cornea. Contact with skin causes severe irritation. (USCG, 1999)

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

Basic treatment: Establish a patent airway (oropharyngeal or nasopharyngeal airway, if needed). Suction if necessary. Watch for signs of respiratory insufficiency and assist ventilations if necessary. Administer oxygen by nonrebreather mask at 10 to 15 L/min. Monitor for pulmonary edema and treat if necessary. Monitor for shock and treat if necessary. Anticipate seizures and treat if necessary. For eye contamination, flush eyes immediately with water. Irrigate each eye continuously with 0.9% saline (NS) during transport. Do not use emetics. For ingestion, rinse mouth and administer 5 mg/kg up to 200 ml of water for dilution if the patient can swallow, has a strong gag reflex, and does not drool. Administer activated charcoal. Cover skin burns with dry sterile dressings after decontamination. /Organic bases/Amines and related compounds/

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## SECTION 5: Firefighting measures

### Extinguishing media

Foam; dry chemical; carbon dioxide. ... water may be ineffective.

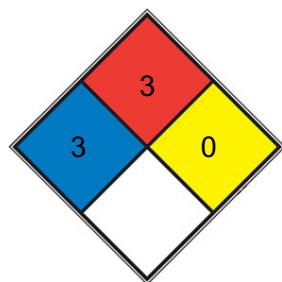
### Specific Hazards Arising from the Chemical

Special Hazards of Combustion Products: Toxic oxides of nitrogen may form in fires. (USCG, 1999)

### Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### NFPA 704



|          |   |  |
|----------|---|--|
| ■ HEALTH | 3 | Short exposure could cause serious temporary or moderate residual injury (e.g. <a href="#">liquid hydrogen</a> , <a href="#">sulfuric acid</a> , <a href="#">calcium hypochlorite</a> , 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, <a href="#">acetone</a> ) |
| ■ REACT  | 0 | Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, <a href="#">N<sub>2</sub></a> )   |
| □ SPEC.  |   |  |
| □ HAZ.   |   |  |

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## SECTION 6: Accidental release measures

## Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

## Environmental precautions

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

## Methods and materials for containment and cleaning up

Evacuate and restrict persons not wearing protective equipment from area of spill or leak until cleanup is complete. Remove all ignition sources. Ventilate area of spill or leak. Absorb liquids in vermiculite, dry sand, earth, peat, carbon, or a similar material and deposit in sealed containers. Keep this chemical out of confined spaces, such as a sewer, because of the possibility of an explosion, unless the sewer is designed to prevent the build up of explosive concentrations. It may be necessary to contain and dispose of this chemical as a hazardous waste. If material or contaminated runoff enters waterways, notify downstream users of potentially contaminated waters. Contact your Department of Environmental Protection or your regional office of the federal EPA for specific recommendations. If employees are required to clean-up spills, they must be properly trained and equipped. OSHA 1910.120(q) may be applicable.

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## 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

Before entering a confined space where this chemical may be present, check to make sure that an explosive concentration does not exist. Store in Tightly closed containers in a cool, well-ventilated area. Metal containers involving the transfer of this chemical should be grounded and bonded. Where possible, automatically pump liquid from drums or other storage containers to process containers. Drums must be equipped with self-closing valves, pressure vacuum bungs, and flame arresters. Use only non-sparking tools and equipment, especially when opening and closing containers of this chemical. Sources of ignition such as smoking and open flames are prohibited where this chemical is used, handled, or stored in a manner that could create a potential fire or explosion hazard. Wherever this chemical is used, handled, manufactured, or stored, use explosion-proof electrical equipment and fittings.

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## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Occupational Exposure limit values

|           |                           |                   |                          |                   |
|-----------|---------------------------|-------------------|--------------------------|-------------------|
| Component | Dipropylamine             |                   |                          |                   |
| CAS No.   | 142-84-7                  |                   |                          |                   |
|           | Limit value - Eight hours |                   | Limit value - Short term |                   |
|           | ppm                       | mg/m <sup>3</sup> | ppm                      | mg/m <sup>3</sup> |
| Latvia    | ?                         | 2                 | ?                        | ?                 |

|  | Remarks |
|--|---------|
|--|---------|

### 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 tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

#### Skin protection

Wear fire/flammable resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

#### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

#### Thermal hazards

no data available

## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

|  |                                   |
|--|-----------------------------------|
| Physical state   | Liquid                            |
| Colour   | Clear                             |
| Odour  | Ammonia odor                      |
| Melting point/freezing point                             | -63°C(lit.)                       |
| Boiling point or initial boiling point and boiling range | 108°C                             |
| Flammability   | no data available                 |
| Lower and upper explosion limit/flammability limit       | 1.8-9.3%(V)                       |
| Flash point  | 7°C(lit.)                         |
| Auto-ignition temperature                                | 570 deg F (299 deg C)             |
| Decomposition temperature                                | no data available                 |
| pH   | no data available                 |
| Kinematic viscosity                                      | 0.517 mPa.s at 25 deg C           |
| Solubility   | 35g/l (experimental)              |
| Partition coefficient n-octanol/water                    | log Kow = 1.67                    |
| Vapour pressure  | 38 hPa (20 °C)                    |
| Density and/or relative density                          | 0.738                             |
| Relative vapour density                                  | 3.5 (NTP, 1992) (Relative to Air) |
| Particle characteristics                                 | no data available                 |

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## SECTION 10: Stability and reactivity

### Reactivity

Highly flammable. Soluble in water.

### Chemical stability

no data available

### Possibility of hazardous reactions

Forms explosive mixture with air. DIPROPYLAMINE neutralizes acids in exothermic reactions to form salts plus water. May be incompatible with isocyanates, halogenated organics, peroxides, phenols (acidic), epoxides, anhydrides, and acid halides. Flammable gaseous hydrogen may be generated in combination with strong reducing agents, such as hydrides.

### Conditions to avoid

no data available

### Incompatible materials

Incompatible with acids, organic anhydrides, isocyanates, vinyl acetate, acrylates, substituted allyls, alkylene oxides, epichlorohydrin, ketones, aldehydes, alcohols, glycols, phenols, cresols, caprolactum solution. Attacks aluminum, copper, lead, tin, zinc, and their alloys.

### Hazardous decomposition products

When heated to decomposition it emits toxic fumes of nitroxides.

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## SECTION 11: Toxicological information

### Acute toxicity

- Oral: LD50 Rat oral 460 mg/kg
- Inhalation: LC50 Rat inhalation >8.22 mg/cu m/1 hr
- Dermal: no data available

### 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**

no data available

### **STOT-repeated exposure**

no data available

### **Aspiration hazard**

no data available

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## SECTION 12: Ecological information

### **Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: EC50 Daphnia magna straus /water flea/ 73 mg/L for 48 hr. /conditions of bioassay not specified

Toxicity to algae: EC50 Scenedesmus subspicatus (Green algae) 5.4 mg/L/72 hr; Effect: cell multiplication inhibition /Conditions of bioassay not specified in source examined

Toxicity to microorganisms: no data available

### **Persistence and degradability**

AEROBIC: Dipropylamine was determined to be biodegradable using the Japanese MITI test protocol(1).

### **Bioaccumulative potential**

An estimated BCF of 4 was calculated in fish for dipropylamine(SRC), using a log Kow of 1.67(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 dipropylamine was estimated as 190(SRC), using a log Kow of 1.67(1) and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that dipropylamine is expected to have moderate mobility in soil(SRC). The pKa of dipropylamine is 11(4) indicating that this compound will exist almost entirely in the cation form in the environment and cations generally adsorb more strongly to soils containing organic carbon and clay than their neutral counterparts(5).

### **Toxics Screening Level**

The Initial Threshold Screening Level (ITSL) for Di-n-propylamine is 1.5 µg/m<sup>3</sup> based on annual averaging time.

### **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: UN2383 (For reference only, please check.)

IMDG: UN2383 (For reference only, please check.)

IATA: UN2383 (For reference only, please check.)

### UN Proper Shipping Name

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

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

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

### Transport hazard class(es)

ADR/RID: 3 (For reference only, please check.)

IMDG: 3 (For reference only, please check.)

IATA: 3 (For reference only, please check.)

### Packing group, if applicable

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

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

IATA: II (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

## 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

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?pagenID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pagenID=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/>

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