

## Chemical Safety Data Sheet MSDS / SDS

## Diphenhydramine Hydrochloride

Revision Date:2025-01-11 Revision Number:1

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

## Product identifier

Product name : Diphenhydramine Hydrochloride  
CBnumber : CB7709166  
CAS : 147-24-0  
EINECS Number : 205-687-2  
Synonyms : Diphenhydramine hydrochloride,diphenhydramine HCL

## 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 4, Oral

## Label elements

## Pictogram(s)

Signal word Danger

## Hazard statement(s)

H225 Highly Flammable liquid and vapour

H302 Harmful if swallowed

H370 Causes damage to organs

## Precautionary statement(s)

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

P260 Do not breathe 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.

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

P311 Call a POISON CENTER or doctor/physician.

P330 Rinse mouth.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

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

#### **Prevention**

P264 Wash ... thoroughly after handling.

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

#### **Response**

P301+P317 IF SWALLOWED: Get medical help.

P330 Rinse mouth.

#### **Storage**

none

#### **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	: Diphenhydramine Hydrochloride
Synonyms	: Diphenhydramine hydrochloride,diphenhydramine HCL
CAS	: 147-24-0
EC number	: 205-687-2
MF	: C17H22ClNO
MW	: 291.82

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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

**SYMPTOMS:** Symptoms of exposure to this compound may include photosensitivity, hypotension, headache, hemolytic anemia, dizziness, disturbed coordination, nervousness, tremor, insomnia, blurred vision, tinnitus, epigastric distress, nausea, vomiting, diarrhea, constipation and tightness of the chest. Other symptoms may include anaphylactic shock, fatigue, confusion, restlessness, euphoria, diplopia, urinary frequency, drowsiness, urticaria, drug rash, excessive perspiration, chills, dryness of the mouth, nose and throat, palpitations, tachycardia, extrasystoles, thrombocytopenia, agranulocytosis, sedation, excitation, irritability, paresthesia, acute labyrinthitis, neuritis convulsions, anorexia, difficult urination, urinary retention, early menses, thickening of bronchial secretions, wheezing and nasal stuffiness. Other symptoms may include inability to concentrate, muscular weakness, nightmares, difficulty in micturition, elation, depression, hyperpyrexia, muscle twitching lassitude, tingling, heaviness, and weakness of hands. Overdosage reactions may include atropine-like symptoms, dry mouth, fixed and dilated pupils, flushing, gastrointestinal symptoms, central nervous system depression to stimulation, hallucinations, convulsions and death. **ACUTE/CHRONIC HAZARDS:** When heated to decomposition this chemical emits very toxic fumes of nitrogen oxides and hydrogen chloride. (NTP, 1992)

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

no data available

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## SECTION 5: Firefighting measures

### Extinguishing media

Fires involving this material can be controlled with a dry chemical, carbon dioxide or Halon extinguisher. (NTP, 1992)

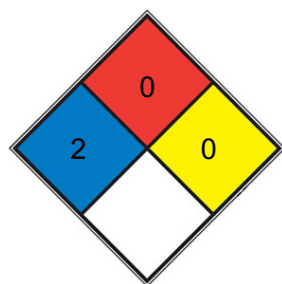
### Specific Hazards Arising from the Chemical

Flash point data for this chemical are not available; however, it is probably combustible. (NTP, 1992)

### Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

### 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)

**FIRE 0** Materials that will not burn under typical fire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand. Materials that will not burn in air when exposed to a temperature of 820 °C (1,500 °F) for a period of 5 minutes.(e.g. Carbon tetrachloride)

☒ REACT 0 Normally stable, even under fire exposure conditions, and is not reactive with water (e.g. helium, [N2](#))

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☐ 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

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

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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

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

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## SECTION 8: Exposure controls/personal protection

### Control parameters

#### Occupational Exposure limit values

no data available

#### 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/flamm 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

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## SECTION 9: Physical and chemical properties

**Information on basic physicochemical properties**

Physical state	Crystalline Powder or Adhering Crystals
Colour	White
Odour	no data available
Melting point/freezing point	13°C(lit.)
Boiling point or initial boiling point and boiling range	273°C(lit.)
Flammability	no data available
Lower and upper explosion limit/flammability limit	no data available
Flash point	123°C(lit.)
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	pH(100g/L, 25°C) 4.0~5.5
Kinematic viscosity	no data available
Solubility	Very soluble in water, freely soluble in alcohol.
Partition coefficient n-octanol/water	no data available
Vapour pressure	no data available
Density and/or relative density	1.024g/cm <sup>3</sup>
Relative vapour density	no data available
Particle characteristics	no data available

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## SECTION 10: Stability and reactivity

**Reactivity**

Water soluble. Aqueous solutions are acidic.

**Chemical stability**

no data available

### **Possibility of hazardous reactions**

DIPHENHYDRAMINE HYDROCHLORIDE gives acidic solutions in water. Neutralizes bases. May react with strong oxidizing and strong reducing agents. May catalyze organic reactions. Slowly darkens on exposure to light.

### **Conditions to avoid**

no data available

### **Incompatible materials**

no data available

### **Hazardous decomposition products**

no data available

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## **SECTION 11: Toxicological information**

### **Acute toxicity**

- Oral: no data available
- Inhalation: no data available
- 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: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

### Persistence and degradability

no data available

### Bioaccumulative potential

no data available

### Mobility in soil

no data available

### Toxics Screening Level

The CORRECTED Screening Level for DIPHENHYDRAMINE HCL (CAS # 147-24-0) has been set at 50 µg/m<sup>3</sup> (annual average) based on the particulate standard.

### 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**

Not Listed.

#### **China Catalog of Hazardous chemicals 2015**

Not Listed.

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

Listed.

#### **PICCS**

Not Listed.

**Vietnam National Chemical Inventory**

Listed.

**IECSC**

Not Listed.

**Korea Existing Chemicals List (KECL)**

Not 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?pagelD=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pagelD=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/>

#### Disclaimer:

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