

## Chemical Safety Data Sheet MSDS / SDS

## Chlorpromazine hydrochloride

Revision Date:2024-12-21 Revision Number:1

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

**Product identifier**

Product name : Chlorpromazine hydrochloride  
CBnumber : CB1492923  
CAS : 69-09-0  
EINECS Number : 200-701-3  
Synonyms : CHLORPROMAZINE HYDROCHLORIDE, chlorpromazine 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 3, Oral  
Acute toxicity - Category 2, Inhalation

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

☐☐

Signal word : Danger

**Hazard statement(s)**

H225 Highly Flammable liquid and vapour  
H301 Toxic if swallowed  
H330 Fatal if inhaled  
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.  
P271 Use only outdoors or in a well-ventilated area.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P284 Wear respiratory protection.  
P310 Immediately call a POISON CENTER or doctor/physician.  
P311 Call a POISON CENTER or doctor/physician.  
P320 Specific treatment is urgent (see ... on this label).  
P330 Rinse mouth.  
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
P304+P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.  
P405 Store locked up.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
P501 Dispose of contents/container to.....

#### **Prevention**

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.  
P271 Use only outdoors or in a well-ventilated area.  
P284 [In case of inadequate ventilation] wear respiratory protection.

#### **Response**

P301+P316 IF SWALLOWED: Get emergency medical help immediately.  
P321 Specific treatment (see ... on this label).  
P330 Rinse mouth.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P316 Get emergency medical help immediately.  
P320 Specific treatment is urgent (see ... on this label).

#### **Storage**

P405 Store locked up.  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

#### **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 : Chlorpromazine hydrochloride

Synonyms	: CHLORPROMAZINE HYDROCHLORIDE, chlorpromazine Hcl
CAS	: 69-09-0
EC number	: 200-701-3
MF	: C17H20Cl2N2S
MW	: 355.33

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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:** This compound can cause severe dermatitis in sensitized persons. It may also cause drowsiness, dryness of mouth, nasal congestion, postural hypotension, lowering of body temperature, tachycardia, arrhythmias, agitation, insomnia, depression, miosis and mydriasis, convulsions, photosensitivity, skin rashes, inhibition of ejaculation, obstructive jaundice, chronic constipation, urinary retention, various hematological disorders, allergic reactions, development of purple pigmentation in exposed skin, deposition of pigment in eyes and altered endocrine functions. It reduces the efficiency of heat regulation such that individuals tend to acquire the temperature of the environment. It also reduces salivary and gastric secretion. It may cause extra-pyramidal effects and sedative (neuroleptic) effects which cause suppression of spontaneous movement and complex movements while spinal reflexes and unconditioned nociceptive-avoidance behaviors remain intact. **ACUTE/CHRONIC HAZARDS:** This compound is an irritant. It may cause dermatitis in sensitized persons. When heated to decomposition it emits very toxic fumes of chlorine, nitrogen oxides and sulfur oxides. (NTP, 1992)

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

Cardiovascular monitoring should begin immediately and should include continuous ECG monitoring to detect possible arrhythmias. Treatment may include correction of electrolyte abnormalities and acid-base balance, lidocaine, phenytoin, isoproterenol, ventricular pacing, and defibrillation. Antiarrhythmic agents that can prolong the QT interval (eg, class IA [disopyramide, procainamide, quinidine] or III agents) should be avoided in treating overdosage-associated arrhythmias in which prolongation of QTc is a manifestation. Appropriate therapy (IV fluids and a vasopressor) should be instituted if hypotension occurs; epinephrine, bretylium, or dopamine should not be used. For the management of refractory hypotension, vasopressors such as phenylephrine, levarterenol, or metaraminol may be used. Appropriate therapy should be instituted if excessive sedation occurs; CNS stimulants that may cause seizures should be avoided. If seizures occur, treatment should not include barbiturates because these drugs may potentiate phenothiazine-induced respiratory depression. Hypothermia is common and sometimes difficult to control. In some patients with acute toxicity, exchange transfusions may be useful, but hemodialysis, forced diuresis, hemoperfusion, or manipulation of urine pH is of little value in enhancing elimination of phenothiazines. Phenothiazine General Statement

## SECTION 5: Firefighting measures

### Extinguishing media

Water spray, dry chemical, carbon dioxide or foam as appropriate for surrounding fire and materials.

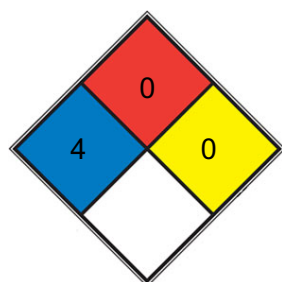
### Specific Hazards Arising from the Chemical

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 4

Very short exposure could cause death or major residual injury (e.g. hydrogen cyanide, phosgene, methyl isocyanate, [hydrofluoric acid](#))

■ 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](#))

□ SPEC.

□ HAZ.

## 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

Wear approved respiratory protection, chemically compatible gloves and protective clothing. Wipe up spillage or collect spillage using a high efficiency vacuum cleaner. Avoid breathing dust. Place spillage in appropriately labeled container for disposal. Wash spill site.

## 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

Chlorpromazine hydrochloride oral solutions, tablets, and injection should be stored at a temperature less than 40 deg C, preferably between 15-30 deg C; freezing of the oral solutions and injection should be avoided. ... Chlorpromazine suppositories should be stored in well-closed containers between 15-30 deg C. ...Chlorpromazine hydrochloride oral concentrate solution should be dispensed in amber glass bottles.

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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/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

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## SECTION 9: Physical and chemical properties

### Information on basic physicochemical properties

Physical state	Powder/Solution
Colour	White to off-white or clear colorless
Odour	Amine odor
Melting point/freezing point	365°C(dec.)(lit.)

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Boiling point or initial boiling point and boiling range	56°C(lit.)
Flammability	no data available
Lower and upper explosion limit/flammability limit	no data available
Flash point	47°C(lit.)
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	pH (50g/L, 25°C) : 4.0~5.0
Kinematic viscosity	no data available
Solubility	Very soluble in water, freely soluble in ethanol (96 per cent). It decomposes on exposure to air and light.
Partition coefficient n-octanol/water	log Kow = 5.41
Vapour pressure	5.17X10 <sup>-6</sup> mm Hg at 25 deg C (est)
Density and/or relative density	1.077 g/cm <sup>3</sup> (15 C)
Relative vapour density	no data available
Particle characteristics	no data available

## SECTION 10: Stability and reactivity

### Reactivity

Decomposes on exposure to air and light. becoming yellow, pink and, finally, violet. Water soluble.

### Chemical stability

Chlorpromazine and its hydrochloride salt darken on prolonged exposure to light. Commercially available preparations of chlorpromazine and its hydrochloride salt should be protected from light.

### Possibility of hazardous reactions

CHLORPROMAZINE HYDROCHLORIDE is incompatible in aqueous solution with sodium salts of barbiturates and other alkaline solutions. Solutions may be stabilized by addition of antioxidants and storing under nitrogen. (NTP, 1992)

### Conditions to avoid

no data available

### Incompatible materials

Chlorpromazine hydrochloride injection is physically and/or chemically incompatible with some drugs, but the compatibility depends on several factors (eg, concentrations of the drugs, specific diluents used, resulting pH, temperature). Specialized references should be consulted for specific compatibility information.

### Hazardous decomposition products

When heated to decomposition it emits very toxic fumes of /hydrogen chloride/, nitroxides, and sulfoxides.

## SECTION 11: Toxicological information

**Acute toxicity**

- Oral: LD50 Rat oral 225 mg/kg
- Inhalation: LC50 Mouse inhalation 209 mg/cu m/2 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: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

**Persistence and degradability**

no data available

**Bioaccumulative potential**

An estimated BCF of 1,700 was calculated in fish for chlorpromazine(SRC), using a log Kow of 5.41(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is very high(SRC), provided the compound is not metabolized by the organism(SRC).

### **Mobility in soil**

The Koc of chlorpromazine is estimated as 9,900(SRC), using a log Kow of 5.41(1) and a regression-derived equation(2). According to a classification scheme(3), this estimated Koc value suggests that chlorpromazine is expected to be immobile in soil. The pKa of chlorpromazine is 9.3(4), indicating that this compound will almost entirely exist in cation form in the environment and cations generally adsorb more strongly to soils containing organic carbon and clay than their neutral counterparts(5).

### **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?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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