

Chemical Safety Data Sheet MSDS / SDS

Chlorpromazine hydrochloride

Revision Date:2024-04-27 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

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

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.

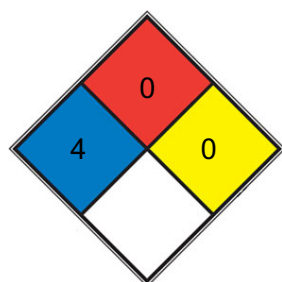
Specific Hazards Arising from the Chemical

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.

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

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.)

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 ⁻⁶ mm Hg at 25 deg C (est)
Density and/or relative density	1.077 g/cm ³ (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

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

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.

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

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.

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

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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