

SAFETY DATA SHEETS

According to the UN GHS revision 9

Version: 1.1
Creation Date: July 15, 2019
Revision Date: May 13, 2024

SECTION 1: Identification

1.1 GHS Product identifier

Product name Chloroneb

1.2 Other means of identification

Product number CCPD100204

Other names -

1.3 Recommended use of the chemical and restrictions on use

Identified uses For laboratory and Industrial use only.

Uses advised against no data available

1.4 Supplier's details

Company CATO Research Chemicals Inc.

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Telephone +86-20-81960175

1.5 Emergency phone number

Emergency phone number +86-20-81960175

Service hours 'Monday to Friday, 9am-5pm (Standard time zone: UTC/GMT +8 hours).

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 2

2.2 GHS label elements, including precautionary statements

Pictogram(s)



Signal word No signal word

Hazard statement(s) H411 Toxic to aquatic life with long lasting effects

Precautionary statement(s)

Prevention P273 Avoid release to the environment.

Response P391 Collect spillage.

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.

2.3 Other hazards which do not result in classification

no data available

SECTION 3: Composition/information on ingredients

3.1 Substances

Chemical name	Common names and synonyms	CAS number	EC number	Concentration
Chloroneb	Chloroneb	2675-77-6	220-222-3	100%

SECTION 4: First-aid measures

4.1 Description of necessary 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.

4.2 Most important symptoms/effects, acute and delayed

SYMPTOMS: Symptoms of exposure to this compound include vomiting, tremors and convulsions. ACUTE/CHRONIC HAZARDS: When heated to decomposition this compound emits toxic fumes of chlorine. (NTP, 1992)

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Treatment is symptomatic and supportive. Oils should not be used as either cathartics or dermal cleansing agents, as they increase absorption. Gastric lavage and use of activated charcoal and sodium sulfate are indicated for ingestion. If dermal exposure occurred, contaminated clothes should be removed, and the skin should be thoroughly cleansed with soap and water. Management of seizures in both children and adults is with Valium or phenobarbital. Respiratory depression and even respiratory arrest, especially with concomitant use of Valium and phenobarbital in children, may occur. These drugs preferably should be used only in critical care areas where emergency endotracheal intubation can be performed. /It is recommended/ that epinephrine not be utilized in patients with organochlorine poisoning, as the organochlorines induce myocardial irritability and ventricular arrhythmias may occur. However, dopamine may be necessary in the event of hypotension unresponsive to fluid administration, and epinephrine may be necessary in the event of cardiopulmonary arrest. Organochlorine insecticides

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

If material on fire or involved in fire: Do not extinguish fire unless flow can be stopped. Use water in flooding quantities as fog. Solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water. Apply water from as far a distance as possible. Use "alcohol" foam, dry chemical or carbon dioxide. Organochlorine pesticide, liquid

5.2 Specific hazards arising from the chemical

This chemical is combustible. (NTP, 1992)

5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

SECTION 6: Accidental release measures

6.1 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.

6.2 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.

6.3 Methods and materials for containment and cleaning up

Environmental considerations: Water spill: Use natural barriers or oil spill control booms to limit spill travel. Use natural deep water pockets, excavated lagoons, or sand bag barriers to trap material at bottom. Remove trapped material with suction hoses. Organochlorine pesticide, solid, toxic

SECTION 7: Handling and storage

7.1 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.

7.2 Conditions for safe storage, including any incompatibilities

Store in a cool, dry place.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

8.2 Appropriate engineering controls

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

8.3 Individual protection measures, such as personal protective equipment (PPE)

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 and safety characteristics

Physical state	PHYSICAL DESCRIPTION: White to tan solid or beige powder. Musty odor. (NTP, 1992)
Colour	Colorless crystals
Odour	Musty odor
Melting point/freezing point	133-135°C
Boiling point or initial boiling point and boiling range	268°C
Flammability	no data available
Lower and upper explosion limit/flammability limit	no data available
Flash point	105.7°C
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	less than 0.1 mg/mL at 73° F (NTP, 1992)
Partition coefficient n-octanol/water	log Kow = 3.44 /Estimated/
Vapour pressure	0.0121 mmHg at 25°C
Density and/or relative density	1.283 g/cm ³
Relative vapour density	no data available
Particle characteristics	no data available

SECTION 10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

Stable $\neq 268^{\circ}\text{C}$ and @ ambient temp in presence of alkali or acid.

10.3 Possibility of hazardous reactions

Chloroneb and its formulated products will catch fire /when exposed to flames/. CHLORONEB is stable at temperatures up to 514° F, in water in the presence of dilute acids or alkalis, and in the common organic solvents. It is subject to microbial decomposition in soil under moist conditions.

10.4 Conditions to avoid

no data available

10.5 Incompatible materials

no data available

10.6 Hazardous decomposition products

When heated to decomposition it emits toxic fumes of hydrogen chloride

SECTION 11: Toxicological information

Acute toxicity

- Oral: LD50 Rat oral >11,000 mg/kg
- Inhalation: no data available
- Dermal: LD50 Rabbit percutaneous >5000 mg/kg

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

Cancer Classification: Data are Inadequate for an Assessment of Carcinogenic Potential

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

12.1 Toxicity

- Toxicity to fish: LC50 Bluegill sunfish >4200 mg/L/46 hr /Conditions of bioassay not specified in source examined
- Toxicity to daphnia and other aquatic invertebrates: EC50 Daphnia magna (Water flea; intoxication, immobilization) 6.19 ppm/48 hr (95% confidence interval: 5.8-6.64 ppm); static
- Toxicity to algae: no data available
- Toxicity to microorganisms: no data available

12.2 Persistence and degradability

AEROBIC: In a soil field study conducted in Delaware, US, chloroneb was reported to have a half-life of 3 to 6 months following its incorporation 2 to 3 inches from the surface of a Keyport silt loam at a concentration of 2 lb active ingredient per acre(1). About 90% of the residual activity recovered from the soil after this period was the parent chloroneb(1). Half-lives of 10 to 180 days have been reported in soil(2). Chloroneb was added to samples of Chalmers silty clay loam soil (at 5.7 ug/g), Kentucky blue grass thatch(at 8.0 ug/g), and Kentucky blue grass clippings(at 8.0 ug/g) and incubated at 25 deg C at a constant moisture (26, 76, and 75%, respectively)(3). Half-lives of 2.7, 8.7, and 69.3 days were reported for the soil, thatch, and grass clipping samples, respectively, when chloroneb was added as a single compound(3). Half-lives of 4.3, 8.7, and 69.3 days were reported for the soil, thatch, and grass clipping samples, respectively, when chloroneb was added as a mixture with triadimefon and vinclozolin(3).

12.3 Bioaccumulative potential

An estimated BCF of 190 was calculated for chloroneb(SRC), using a measured water solubility of 8 mg/L(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is high(SRC), provided the compound is not altered physically or chemically once released into the environment.

12.4 Mobility in soil

Koc values of 1,653(1), 1,260(2), 1,200(3), and 714(4) were measured for chloroneb in soil(SRC). According to a classification scheme(5), these estimated Koc values suggest that chloroneb is expected to have low mobility in soil. In a soil TLC plate study using Hagerstown silty clay loam soil (pH 6.8, 2.5% organic matter, 39.5% clay), chloroneb was immobile(6). In a field study, chloroneb was incorporated into a Keystone silt loam to a depth of 2 to 3 inches. After 6 months, nearly all of the chloroneb remained in the treated layer of soil(7).

12.5 Other adverse effects

no data available

SECTION 13: Disposal considerations

13.1 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

14.1 UN Number

ADR/RID: UN3077 (For reference only, please check.) IMDG: UN3077 (For reference only, please check.) IATA: UN3077 (For reference only, please check.)

14.2 UN Proper Shipping Name

ADR/RID: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (For reference only, please check.)
IMDG: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (For reference only, please check.)
IATA: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (For reference only, please check.)

14.3 Transport hazard class(es)

ADR/RID: 9 (For reference only, please check.) IMDG: 9 (For reference only, please check.) IATA: 9 (For reference only, please check.)

14.4 Packing group, if applicable

ADR/RID: III (For reference only, please check.) IMDG: III (For reference only, please check.) IATA: III (For reference only, please check.)

14.5 Environmental hazards

ADR/RID: Yes IMDG: Yes IATA: Yes

14.6 Special precautions for user

no data available

14.7 Transport in bulk according to IMO instruments

no data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Chemical name	Common names and synonyms	CAS number	EC number
Chloroneb	Chloroneb	2675-77-6	220-222-3
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)			Not Listed.
Philippines Inventory of Chemicals and Chemical Substances (PICCS)			Not Listed.
Vietnam National Chemical Inventory			Listed.
Chinese Chemical Inventory of Existing Chemical Substances (China IECSC)			Listed.
Korea Existing Chemicals List (KECL)			Listed.

SECTION 16: Other information

Information on revision

Creation Date July 15, 2019
Revision Date May 13, 2024

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>



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- 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?pageID=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/>

Any questions regarding this SDS, Please send your inquiry to info@cato-chem.com

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