

Chemical Safety Data Sheet MSDS / SDS

Chlorophacinone SDS

Revision Date:2024-04-25 Revision Number:1

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**Product identifier**

Product name: Chlorophacinone

CAS: 3691-35-8

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.in

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SECTION 2: Hazards identification**Classification of the substance or mixture**

Acute toxicity - Category 1, Oral

Acute toxicity - Category 1, Dermal

Acute toxicity - Category 1, Inhalation
Specific target organ toxicity - repeated exposure, Category 1
Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1
Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 1
Reproductive toxicity, Category 1B

GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Danger

Hazard statement(s)

H300 Fatal if swallowed
H310 Fatal in contact with skin
H330 Fatal if inhaled
H372 Causes damage to organs through prolonged or repeated exposure
H410 Very toxic to aquatic life with long lasting effects

Precautionary statement(s)

Prevention

P264 Wash ... thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P262 Do not get in eyes, on skin, or on clothing.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
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.
P273 Avoid release to the environment.
P203 Obtain, read and follow all safety instructions before use.

Response

P301+P316 IF SWALLOWED: Get emergency medical help immediately.
P321 Specific treatment (see ... on this label).
P330 Rinse mouth.
P302+P352 IF ON SKIN: Wash with plenty of water/...
P316 Get emergency medical help immediately.

P361+P364 Take off immediately all contaminated clothing and wash it before reuse.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P320 Specific treatment is urgent (see ... on this label).
P319 Get medical help if you feel unwell.
P391 Collect spillage.
P318 IF exposed or concerned, get medical advice.

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 which do not result in classification

no data available

SECTION 3: Composition/information on ingredients

Substance

Chemical name:	Chlorophacinone
Common names and synonyms:	Chlorophacinone
CAS number:	3691-35-8
EC number:	223-003-0
Concentration:	100%

SECTION 4: First aid measures

Description of necessary first-aid measures

If inhaled

Refer immediately for medical attention.

Following skin contact

Wear protective gloves when administering first aid. Remove contaminated clothes. See Notes. Rinse and then wash skin with water and soap. Refer immediately for medical attention.

Following eye contact

Rinse with plenty of water (remove contact lenses if easily possible). Refer immediately for medical attention.

Following ingestion

Rinse mouth. Give a slurry of activated charcoal in water to drink. Refer immediately for medical attention.

Most important symptoms/effects, acute and delayed

Chlorophacinone is highly toxic orally and by skin absorption. The probable oral lethal dose for humans is less than 5 mg/kg to 50 mg/kg, or between a taste (less than 7 drops) and 1 teaspoonful for a 150 lb. (70 kg) person. (EPA, 1998)

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

Human exposure to second-generation and indandione anticoagulants produces symptoms consistent with anticoagulation effects (e.g., hematomas, hematemesis, hematuria, easy bruisability). Treatment of cases of exposure, particularly of substantial and repeated exposure, may require vitamin K1 therapy and monitoring of prothrombin times for periods of many months.

SECTION 5: Firefighting measures**Suitable extinguishing media**

Wear self contained breathing apparatus for fire fighting, if necessary.

Specific hazards arising from the chemical

Non-Specific -- Coumarin Derivative Pesticide, Solid, n.o.s.) Fire may produce irritating or poisonous gases. Runoff from fire control water may give off poisonous gases. Runoff from fire control or dilution water may cause pollution. When heated it emits toxic fumes of chlorides. (EPA, 1998)

Special protective actions for fire-fighters

Use powder, water spray, foam, carbon dioxide.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal protection: chemical protection suit including self-contained breathing apparatus. Do NOT let this chemical enter the environment. Sweep spilled substance into containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

Environmental precautions

Personal protection: chemical protection suit including self-contained breathing apparatus. Do NOT let this chemical enter the environment. Sweep spilled substance into containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

Methods and materials for containment and cleaning up

Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

SECTION 7: Handling and storage

Precautions for safe handling

NO open flames. 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

Provision to contain effluent from fire extinguishing. Separated from food and feedstuffs. Well closed. Store in an area without drain or sewer access. Keep container tightly closed in a dry and well-ventilated place.

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational Exposure limit values

no data available

Biological limit values

no data available

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.

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

Eye/face protection

Wear face shield or eye protection in combination with breathing protection if powder.

Skin protection

Protective gloves. Protective clothing.

Respiratory protection

Use closed system.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties and safety characteristics

Physical state:	Crystals. Commercially available as oil concentrate and as dust concentrate. Used as an anticoagulant rodenticide. Chronic acting, multiple dose rodenticide. (EPA, 1998)
Colour:	Pale yellow crystals
Odour:	Odorless
Melting point/freezing point:	140-144°C
Boiling point or initial boiling point and boiling range:	555.5°C at 760 mmHg
Flammability:	Combustible. Gives off irritating or toxic fumes (or gases) in a fire.

Lower and upper explosion limit/flammability limit:	no data available
Flash point:	>100°C
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
pH:	no data available
Kinematic viscosity:	no data available
Solubility:	In water, 100 mg/L at 20 deg C
Partition coefficient n-octanol/water:	log Kow at 23 deg C: 3.08 (pH 4), 2.42 (pH 7), 2.57 (pH 9)
Vapour pressure:	1X10 ⁻⁴ mPa /7.5X10 ⁻¹⁰ mm Hg/ at 25 deg C
Density and/or relative density:	1.342g/cm ³
Relative vapour density:	no data available
Particle characteristics:	no data available

SECTION 10: Stability and reactivity

Reactivity

Decomposes on heating. This produces toxic and corrosive fumes including hydrogen chloride.

Chemical stability

Very stable and resistant to weathering.

Possibility of hazardous reactions

Not flammable or combustible. Fire may produce irritating or poisonous gases.

Conditions to avoid

no data available

Incompatible materials

no data available

Hazardous decomposition products

When heated to decomposition it emits toxic fumes of hydrogen chloride.

SECTION 11: Toxicological information**Acute toxicity**

Oral: LD50 Mouse oral 1.06 mg/kg

Inhalation: LC50 Rat inhalation >3.0 mg/L/1 hr

Dermal: LD50 Albino rabbit percutaneous 200 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

no data available

Reproductive toxicity

no data available

STOT-single exposure

The substance may cause effects on the blood. This may result in bleeding. The effects may be delayed. Medical observation is indicated. See Notes. Exposure could cause death.

STOT-repeated exposure

The substance may have effects on the blood. This may result in bleeding.

Aspiration hazard

A harmful concentration of airborne particles can be reached quickly when dispersed.

SECTION 12: Ecological information

Toxicity

Toxicity to fish: LC50; Species: *Lepomis macrochirus* (Bluegill); Conditions: freshwater, flow through; Concentration: 710 µg/L for 96 hr (95% confidence interval: 630-830 µg/L) /100% purity

Toxicity to daphnia and other aquatic invertebrates: EC50; Species: *Daphnia magna* (Water Flea) age <24 hr; Conditions: freshwater, flow through; Concentration: 640 µg/L for 48 hr (95% confidence interval: 540-820 µg/L); Effect: intoxication, immobilization /100% purity

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

Persistence and degradability

AEROBIC: Using OECD 301F (manometric respirometry test) with an activated sewage sludge inoculum, no biodegradation of chlorophacinone was observed after an incubation period of 28 days classifying the compound as not readily biodegradable under the conditions of the test(1). Chlorophacinone was found to be moderately degradable in a sandy loam soil under aerobic

conditions with a half-life of 21-25 days(2). In laboratory tests conducted at 25 deg C under dark aerobic conditions using a sandy clay loam soil and a sandy loam soil, chlorophacinone had half-lives of 47.3 and 17.1 days respectively(1); extrapolation of the 47.3 day half-life to 12 deg C (to reflect an average European Union outdoor temperature) yields an estimated half-life of 128 days(1); degradation of the chlorophacinone resulted predominantly in the formation of carbon dioxide(1).

Bioaccumulative potential

An estimated BCF range of 5-13 was calculated in fish for chlorophacinone(SRC), using a measured log Kow range of 2.40-3.08(1) over a pH range of 4-9 and a regression-derived equation(2). According to a classification scheme(3), this BCF range suggests the potential for bioconcentration in aquatic organisms is low(SRC).

Mobility in soil

Koc values ranging from 15,600 to 136,000 were determined for chlorophacinone in four types of soils (clay, sand, sandy clay loam and loam)(1). According to a classification scheme(2), this Koc range suggests that chlorophacinone is expected to be immobile in soil. The pKa of chlorophacinone is 3.40(3), 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(4). [

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: UN2761 (For reference only, please check.)

IMDG: UN2761 (For reference only, please check.)

IATA: UN2761 (For reference only, please check.)

UN Proper Shipping Name

ADR/RID: ORGANOCHLORINE PESTICIDE, SOLID, TOXIC (For reference only, please check.)

IMDG: ORGANOCHLORINE PESTICIDE, SOLID, TOXIC (For reference only, please check.)

IATA: ORGANOCHLORINE PESTICIDE, SOLID, TOXIC (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: Yes

IMDG: Yes

IATA: Yes

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

Not Listed.

China Catalog of Hazardous chemicals 2015

Listed.

New Zealand Inventory of Chemicals (NZIoC)

Not Listed.

(PICCS)

Not Listed.

Vietnam National Chemical Inventory

Listed.

IECSC)

Not 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?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/>

Other Information

Depending on the degree of exposure, periodic medical examination is suggested. Specific treatment is necessary in case of poisoning with this substance; the appropriate means with instructions must be available. Do NOT take working clothes home. Isolate contaminated clothing by sealing in a bag or other container.

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. We as supplier shall not be held liable for any