

## Chemical Safety Data Sheet MSDS / SDS

## Hexachlorophene SDS

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

Section 1	Section 2	Section 3	Section 4	Section 5	Section 6	Section 7	Section 8
Section 9	Section 10	Section 11	Section 12	Section 13	Section 14	Section 15	Section 16

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

Product name: Hexachlorophene

CAS: 70-30-4

**Relevant identified uses of the substance or mixture and uses advised against**

Relevant identified uses: For R&amp;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 3, Oral

Acute toxicity - Category 3, Dermal

Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1  
Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 1

### GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Danger

### Hazard statement(s)

H301 Toxic if swallowed  
H311 Toxic in contact with skin  
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.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...  
P273 Avoid release to the environment.

### 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.  
P391 Collect spillage.

### Storage

P405 Store locked up.

### 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:	Hexachlorophene
Common names and synonyms:	Hexachlorophene
CAS number:	70-30-4
EC number:	200-733-8
Concentration:	100%

### SECTION 4: First aid measures

#### Description of necessary first-aid measures

##### If inhaled

Fresh air, rest.

##### Following skin contact

Remove contaminated clothes. Rinse and then wash skin with water and soap. Refer for medical attention .

##### Following eye contact

Rinse with plenty of water (remove contact lenses if easily possible).

##### Following ingestion

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

#### Most important symptoms/effects, acute and delayed

Inhalation of dust is poisonous; irritating to mucous membranes. Eye and skin irritant. Poisonous if swallowed. Symptoms following ingestion include anorexia, nausea, vomiting, abdominal cramps, and diarrhea. Dehydration may be severe and may be associated

with shock. (USCG, 1999)

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

Other therapies. Though this compound is quite toxic systemically and enhanced clearance methods would appear beneficial, there is no evidence to support the efficacy of hemodialysis, peritoneal dialysis, hemoperfusion, or exchange transfusion.

### **SECTION 5: Firefighting measures**

#### **Suitable extinguishing media**

If material on fire or involved in fire: Extinguish fire using agent suitable for type of surrounding fire. (Material itself does not burn or burns with difficulty.) Use water in flooding quantities as fog. Use foam, dry chemical or carbon dioxide. Keep run-off waste out of sewers and water sources.

#### **Specific hazards arising from the chemical**

Special Hazards of Combustion Products: Contain toxic and irritating chloride fumes. Behavior in Fire: Decomposes to produce toxic and irritating gases. (USCG, 1999)

#### **Special protective actions for fire-fighters**

Use water spray, powder, foam, carbon dioxide.

### **SECTION 6: Accidental release measures**

#### **Personal precautions, protective equipment and emergency procedures**

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Sweep spilled substance into covered sealable containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

#### **Environmental precautions**

Personal protection: particulate filter respirator adapted to the airborne concentration of the substance. Do NOT let this chemical enter the environment. Sweep spilled substance into covered sealable 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**

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.

## **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**

Separated from food and feedstuffs. Store in an area without drain or sewer access. Provision to contain effluent from fire extinguishing. Store at room temperature up to 25 deg C (77 deg F).

## **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.

#### **Skin protection**

Protective gloves. Protective clothing.

### Respiratory protection

Use local exhaust or breathing protection.

### Thermal hazards

no data available

## SECTION 9: Physical and chemical properties and safety characteristics

Physical state:	Hexachlorophene is a white free-flowing odorless powder. Insoluble in water and denser than water. Contact may irritate skin, eyes and mucous membranes. May be toxic by ingestion. Used to make other chemicals.
Colour:	Crystals from benzene
Odour:	ODORLESS OR HAS ONLY SLIGHTLY PHENOLIC ODOR
Melting point/freezing point:	160 - 166°C
Boiling point or initial boiling point and boiling range:	166°C
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:	238.6°C
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
pH:	no data available

Kinematic viscosity:	no data available
Solubility:	less than 1 mg/mL at 68° F (NTP, 1992)
Partition coefficient n-octanol/water:	7.54 (calculated)
Vapour pressure:	8.3X10 <sup>-11</sup> mm Hg at 25 deg C (est)
Density and/or relative density:	1.713g/cm <sup>3</sup>
Relative vapour density:	no data available
Particle characteristics:	no data available

## SECTION 10: Stability and reactivity

### Reactivity

Decomposes on heating and on burning. This produces toxic and irritating fumes including hydrogen chloride. Reacts with strong oxidants.

### Chemical stability

no data available

### Possibility of hazardous reactions

HEXACHLOROPHENE is incompatible with strong oxidizers. It forms salts with alkalis and alkaline earths. (NTP, 1992)

### Conditions to avoid

no data available

### Incompatible materials

Oxidizers.

### **Hazardous decomposition products**

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

## **SECTION 11: Toxicological information**

### **Acute toxicity**

Oral: LD50 Rat oral 56 mg/kg

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**

Classification of carcinogenicity: 1) evidence in humans: no data; 2) evidence in animals: inadequate. Overall summary evaluation of carcinogenic risk to humans is Group 3: The agent is not classifiable as to its carcinogenicity to humans. From table

### **Reproductive toxicity**

no data available

### **STOT-single exposure**



The substance may cause effects on the nervous system and optic nerve. This may result in cardiac disorders, respiratory failure and blindness. The effects may be delayed up to 48 hours. Medical observation is indicated.

#### **STOT-repeated exposure**

Repeated or prolonged contact with skin may cause dermatitis. Repeated or prolonged contact may cause skin sensitization. The substance may have effects on the nervous system and optic nerve. This may result in tissue lesions and blindness. May cause toxicity to human reproduction or development.

#### **Aspiration hazard**

A nuisance-causing concentration of airborne particles can be reached quickly when dispersed.

## **SECTION 12: Ecological information**

### **Toxicity**

Toxicity to fish: LC50; Species: *Pimephales promelas* (Fathead minnow) age 30 days, length 20.1 mm, weight 0.103 g; Conditions: freshwater, flow through, 24.3 deg C, pH 7.30, hardness 51.1 mg/L CaCO<sub>3</sub>, alkalinity 45.8 mg/L CaCO<sub>3</sub>, dissolved oxygen 5.8 mg/L; Concentration: 21 ug/L for 96 hr (95% confidence interval: 19-23 ug/L) /99% purity

Toxicity to daphnia and other aquatic invertebrates: EC50; Species: *Daphnia magna* (Water Flea) age <24 hr neonate; Conditions: freshwater, static, 21 deg C, pH 7.6; Concentration: 0.000487 mM for 24 hr; Effect: intoxication, immobilization

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

### **Persistence and degradability**

AEROBIC: Hexachlorophene, present at 100 mg/L, reached 0% of its theoretical BOD in 4 weeks using an activated sludge inoculum at 30 mg/L in the Japanese MITI test(1). Radio-labeled C14-hexachlorophene was not biodegraded in surface water from the Skidaway River, GA(2). In sediments from Skidaway River, radio-labeled C14-hexachlorophene was degraded with a half-life of 290 days(2).

### **Bioaccumulative potential**

The BCF of hexachlorophene in carp (*Cyprinus carpio*), exposed for 8 weeks to 2 and 0.2 ug/L were 87-148 and 82-153, respectively(1). BCFs for hexachlorophene in mosquito fish (*Gambusia affinis*) and snails (*Physa* sp) are 278 and 970, respectively(2). According to a classification scheme(3), these BCFs suggest the potential for bioconcentration in aquatic organisms is moderate to high(SRC).

### **Mobility in soil**

The Koc of hexachlorophene has been reported as 91,000(1). According to a classification scheme(2), this Koc value suggests that hexachlorophene is expected to be immobile in soil. The pKa of hexachlorophene is 4.95(3), indicating that this compound will partially exist in anion form in the environment and anions generally do not adsorb more strongly to soils containing organic carbon and clay than their neutral counterparts(4). A study of the mobility in Hagerstown silty clay loam soil TLC (thin layer chromatography) plates using 10 soil fungi and an alga (range of Rf values, 0.01-0.04, avg 0.01) indicated very little movement on the soil TLC plates(5). A monitoring study identified hexachlorophene in humic acid fractions of two sediment samples taken at least eight years after the FDA ban on the over-the-counter sale of cosmetics and drugs containing more than 0.1% hexachlorophene(6). These data indicate that hexachlorophene was strongly associated with organic matter which may have been as a result of covalent binding of the ionizable compound(5-6).

### **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: UN2875 (For reference only, please check.)

IMDG: UN2875 (For reference only, please check.)

IATA: UN2875 (For reference only, please check.)

### **UN Proper Shipping Name**

ADR/RID: HEXACHLOROPHENE (For reference only, please check.)

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

IATA: HEXACHLOROPHENE (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: III (For reference only, please check.)

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

IATA: III (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**

Listed.

**China Catalog of Hazardous chemicals 2015**

Listed.

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

Listed.

**(PICCS)**

Listed.

**Vietnam National Chemical Inventory**

Not Listed.

**IECSC)**

Listed.

**Korea Existing Chemicals List (KECL)**

Not 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](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/>

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