ChemicalBook

Chemical Safety Data Sheet MSDS / SDS

Octachloronaphthalene

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

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

Product identifier

Product name	: Octachloronaphthalene
CBnumber	: CB1394564
CAS	: 2234-13-1
EINECS Number	: 218-778-7
Synonyms	: Octachloronaphthalene,1,2,3,4,5,6,7,8-octachloronaphthalene

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	: 010-86108875

SECTION 2: Hazards identification

Classification of the substance or mixture

Acute toxicity - Category 4, Oral

Label elements

Pictogram(s)

Signal word Danger

Hazard statement(s)

H225 Highly Flammable liquid and vapour

H302 Harmful if swallowed

H304 May be fatal if swallowed and enters airways

H315 Causes skin irritation

H336 May cause drowsiness or dizziness

H410 Very toxic to aquatic life with long lasting effects

Precautionary statement(s)

P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P273 Avoid release to the environment.

P331 Do NOT induce vomiting.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.

P501 Dispose of contents/container to.....

Prevention

P264 Wash ... thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

Response

P301+P317 IF SWALLOWED: Get medical help.

P330 Rinse mouth.

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.

Other hazards

no data available

SECTION 3: Composition/information on ingredients

Substance

Product name	: Octachloronaphthalene
Synonyms	: Octachloronaphthalene,1,2,3,4,5,6,7,8-octachloronaphthalene
CAS	: 2234-13-1
EC number	: 218-778-7
MF	: C10Cl8
MW	: 403.73

SECTION 4: First aid measures

Description of first aid measures

If inhaled

Fresh air, rest. Refer for medical attention.

Following skin contact

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

Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

Following ingestion

Rinse mouth. Refer for medical attention .

Most important symptoms and effects, both acute and delayed

Exposure Routes: inhalation, skin absorption, ingestion, skin and/or eye contact Symptoms: Acne-form dermatitis; liver damage, jaundice Target Organs: Skin, liver (NIOSH, 2016)

Indication of any immediate medical attention and special treatment needed

NAPHTHALENE toxicosis caused by vapor inhalation can usually be managed simply by removing the individual to fresh air. Skin contamination should be removed promptly by washing with soap and water. Eye contamination should be removed by flushing with copious amounts of clear water. Irritation may be severe, and if it persists, should receive medical attention. SRP: /It may be helpful to empty stomach and administer dose of activated charcoal/ Examine the plasma for evidence of hemolysis: a reddish-brown tinge. Examine the blood smear for "ghosts" and Heinz bodies. If /hemolysis is/ present, monitor red blood cell count and hematocrit for anemia, urine for protein, and cells. Measure direct- and indirect-reacting bilirubin in the plasma. Monitor fluid balance and blood electrolytes. If possible, monitor urinary excretion of naphthol to assess severity of poisoning and clinical progress. If hemolysis is clinically significnt, administer intravenous fluids to accelerate urinary excretion of the naphthol metabolite and protect the kidney from products of hemolysis. Use Ringer's-lactate or sodium bicarbonate to keep urine pH above 7.5. Consider use of mannitol, or furosemide, to promote diuresis. If urine flow declines, intravenous infusions must be carefully monitored to avoid fluid overload. Institute hemodialysis. Consider charcoal hemoperfusion in tandem to extract naphthalene and end-products. If anemia is severe, blood transfusions may be needed. Hydrocortisone may be of some benefit if significant hemolysis is present. Fumigant poisoning

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SECTION 5: Firefighting measures

Extinguishing media

In case of fire in the surroundings: all extinguishing agents allowed.

Specific Hazards Arising from the Chemical

Literature sources indicate that this chemical is nonflammable. (NTP, 1992)

Advice for firefighters

In case of fire in the surroundings, use appropriate extinguishing media.

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. Sweep spilled substance into covered containers. 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. Sweep spilled substance into covered containers. Carefully collect remainder. Then store and dispose of according to local regulations.

Methods and materials for containment and cleaning up

First remove all sources of ignition, then dampen the solid spill material with toluene, then transfer the dampened material to a suitable container. Use absorbent paper dampened with toluene to pick up any remaining material. Your contaminated clothing and absorbent paper

should be sealed in a vapor-tight plastic bag for eventual disposal. Solvent-wash all contaminated surfaces with toluene followed by washing with a soap and water solution. Do not reenter the contaminated area until the Safety Officer (or other responsible person) has verified that the area has been properly cleaned.

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

This material should be stored in a refrigerator.

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational Exposure limit values

TLV: 0.1 mg/m3, as TWA; 0.3 mg/m3 as STEL; (skin)

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 safety goggles, face shield or eye protection in combination with breathing protection.

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

Information on basic physicochemical properties

Physical state	neat
Colour	Waxy, light yellow solid with an aromatic odor
Odour	Aromatic odor

Melting point/freezing point	185°C
Boiling point or initial boiling point and boiling range	440°C
Flammability	Noncombustible Solid
Lower and upper explosion limit/flammability limit	no data available
Flash point	-18°C
Auto-ignition temperature	no data available
Decomposition temperature	no data available
pH	no data available
Kinematic viscosity	no data available
Solubility	Soluble in benzene, chloroform, and ligroin (Weast, 1986)
Partition coefficient n-octanol/water	log Kow = 8.5
Vapour pressure	4.20×10^{-7} mmHg at 25.00 °C (Lei et al., 1999)
Density and/or relative density	2
Relative vapour density	13.9 (air=1 at boiling point of octachloronaphthalene) (NTP, 1992) (Relative to Air)
Particle characteristics	no data available

SECTION 10: Stability and reactivity

Reactivity

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

Chemical stability

no data available

Possibility of hazardous reactions

Not combustibleContact with strong oxidizing agents may cause fire and explosion (NTP, 1992).

Conditions to avoid

no data available

Incompatible materials

Contact with strong oxidizing agents may cause fire and explosion.

Hazardous decomposition products

The substance decomposes on heating producing toxic fumes (chlorine).

SECTION 11: Toxicological information

Acute toxicity

- Oral: no data available

- 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

no data available

Reproductive toxicity

no data available

STOT-single exposure

The substance may cause effects on the liver. This may result in tissue lesions.

STOT-repeated exposure

The substance may have effects on the liver.

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

Octachloronaphthalene is reported to have "poor" biodegradability(1). Tetra to hexachlorinated naphthalenes showed no biodegradation during 28 day aerobic biodegradation experiments, although there is some evidence that lower chlorinated forms may biodegrade(2).In addition, a predictive method based upon evaluated biodegradation data and the fact that octachloronaphthalene contains 8 aromatic chlorine substructures predicts that octachloronaphthalene

Bioaccumulative potential

Bioconcentration factor in Oncorhynchus mykiss, exposure concentration 1.3 x 10(-2) ug/L, 330

Mobility in soil

Using a structure estimation method based on molecular connectivity indices(1), the Koc for octachloronaphthalene can be estimated to be 1.1X10+5(SRC). According to a classification scheme(2), this estimated Koc value suggests that octachloronaphthalene is expected to be immobile in soil.

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: UN1145 (For reference only, please check.)

IMDG: UN1145 (For reference only, please check.)

IATA: UN1145 (For reference only, please check.)

UN Proper Shipping Name

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

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

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

Transport hazard class(es)

ADR/RID: 3 (For reference only, please check.)

IMDG: 3 (For reference only, please check.)

IATA: 3 (For reference only, please check.)

Packing group, if applicable

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

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

IATA: II (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)

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/