Chemical Safety Data Sheet MSDS / SDS

Clofenotane SDS

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

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

Product identifier

Product name: Clofenotane

CAS: 50-29-3

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

Address: 5 vasavi Layout Basaveswara Nilayam Pragathi Nagar Hyderabad, India -500090

Telephone: +91 9550333722

SECTION 2: Hazards identification

Classification of the substance or mixture

Acute toxicity - Category 3, Oral
Carcinogenicity, Category 2

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

GHS label elements, including precautionary statements

Pictogram(s)

Signal word Danger

Hazard statement(s)

H301 Toxic if swallowed
H351 Suspected of causing cancer
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.
P203 Obtain, read and follow all safety instructions before use.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
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.
P318 IF exposed or concerned, get medical advice.
P319 Get medical help if you feel unwell.
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:	Clofenotane
Common names and synonyms:	Clofenotane
CAS number:	50-29-3
EC number:	200-024-3
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.

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

Most important symptoms/effects, acute and delayed

Excerpt from ERG Guide 151 [Substances - Toxic (Non-combustible)]: Highly toxic, may be fatal if inhaled, swallowed or absorbed through skin. Avoid any skin contact. Effects of contact or inhalation may be delayed. Fire may produce irritating, corrosive and/or toxic gases. Runoff from fire control or dilution water may be corrosive and/or toxic and cause pollution. (ERG, 2016)

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

Observation. Persons exposed to high levels of organochlorine pesticides by any route should be observed for sensory disturbances, incoordination, speech slurring, mental aberrations, and involuntary motor activity that would warn of imminent convulsions. Solid organochlorine insecticides

SECTION 5: Firefighting measures

Suitable extinguishing media

Fire extinguishing agents: Water, foam, dry chemical, or carbon dioxide.

Specific hazards arising from the chemical

Excerpt from ERG Guide 151 [Substances - Toxic (Non-combustible)]: Non-combustible, substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Containers may explode when heated. Runoff may pollute waterways. (ERG, 2016)

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, non-metallic 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, non-metallic 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

SRP: Wastewater from contaminant suppression, cleaning of protective clothing/equipment, or contaminated sites should be contained and evaluated for subject chemical or decomposition product concentrations. Concentrations shall be lower than applicable environmental discharge or disposal criteria. Alternatively, pretreatment and/or discharge to a POTW is acceptable only after review by the governing authority. Due consideration shall be given to remediation worker exposure (inhalation, dermal and ingestion) as well as fate during treatment, transfer and disposal. If it is not practicable to manage the chemical in this fashion, it must meet Hazardous Material Criteria for disposal.

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 iron, aluminium, aluminium salts and food and feedstuffs. See Chemical Dangers.... Should not be kept in iron containers and should not be mixed with iron and aluminum salts nor with alkaline substances. High storage temperatures should also be avoided.

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational Exposure limit values

TLV: 1 mg/m3, as TWA; A3 (confirmed animal carcinogen with unknown relevance to humans).MAK: (inhalable fraction): 1 mg/m3; peak limitation category: II(8); skin absorption (H)

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 safety goggles or eye protection in combination with breathing protection if powder.

Skin protection

Protective gloves.

Respiratory protection

Use local exhaust or breathing protection.

Thermal hazards

no data available

SECTION 9: Physical and chemical properties and safety characteristics

Physical state:	Ddt and metabolites is a colorless crystalline solid or white to off-white powder. Odorless to slightly aromatic. Insoluble in water. Used as an insecticide.
Colour:	Biaxial elongated tablets, needles from 95% alcohol
Odour:	Odorless or with slight aromatic odor
Melting point/freezing point:	107-110°C
Boiling point or initial boiling point and boiling range:	260°C
Flammability:	Combustible Solid
Lower and upper explosion limit/flammability limit:	no data available
Flash point:	72?°C

Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
pH:	no data available
Kinematic viscosity:	no data available
Solubility:	Soluble in acetone, ether, benzene, carbon tetrachloride, kerosene, dioxane, and pyridine.
Partition coefficient n-octanol/water:	log Kow = 6.91
Vapour pressure:	1.6X10-7 mm Hg at 20 deg C
Density and/or relative density:	1.451g/cm3
Relative vapour density:	no data available
Particle characteristics:	no data available

SECTION 10: Stability and reactivity

Reactivity

NIOSH considers DDT to be a potential occupational carcinogen.
On combustion, forms toxic and corrosive fumes including hydrogen chloride. Reacts with aluminium and iron.

Chemical stability

Resistant to destruction by light and oxidation

Possibility of hazardous reactions

Behavior in fire: Melts and burns.Halogenated aliphatic compounds, such as DDT AND METABOLITES, are moderately or very reactive. Halogenated organics generally become less reactive as more of their hydrogen atoms are replaced with halogen atoms. Materials in this group may be incompatible with strong oxidizing and reducing agents. Also, they may be incompatible with many

amines, nitrides, azo/diazo compounds, alkali metals, and epoxides. This material is incompatible with alkaline media.

Conditions to avoid

no data available

Incompatible materials

Strong oxidizers, alkalis.

Hazardous decomposition products

Decomp at 110 deg C; dehydrochlorinates in alkali or org bases when in org solvents

SECTION 11: Toxicological information

Acute toxicity

Oral: LD50 Mouse oral 150-300 mg/kg

Inhalation: no data available

Dermal: LD50 Female rat percutaneous 2510 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

Evaluation: There is inadequate evidence in humans for the carcinogenicity of DDT. There is sufficient evidence in experimental animals for the carcinogenicity of DDT. Overall evaluation: DDT is possibly carcinogenic to humans (2B).

Reproductive toxicity

no data available

STOT-single exposure

May cause mechanical irritation. The substance may cause effects on the central nervous system. This may result in convulsions and respiratory depression. Exposure at high levels could cause death. Medical observation is indicated.

STOT-repeated exposure

The substance may have effects on the central nervous system and liver. This substance is possibly carcinogenic to humans. Animal tests show that this substance possibly causes toxicity to human reproduction or development.

Aspiration hazard

Evaporation at 20°C is negligible; a harmful concentration of airborne particles can, however, be reached quickly , especially if powdered.

SECTION 12: Ecological information

Toxicity

Toxicity to fish: LC50; Species: Ictalurus melas (Black bullhead, wt 1.2 g); Conditions: static bioassay, 18 deg C; Concentration: 4.8 ug/L for 96 hr (95% confidence limit 3.4-6.8 ug/L) /Technical material, 99%

Toxicity to daphnia and other aquatic invertebrates: EC50; Species: Daphnia magna (Water flea, adult 2-26 hr); Conditions: freshwater, static; Concentration: 6.5 ug/L for 24 hr; Effect: intoxication, immobilization /formulated product

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

Persistence and degradability

DDT is biodegraded by a number of microorganisms isolated from water, sediments and soils(1,2). Biodegradation under environmental conditions has been shown to be quite variable, however, with a number of factors playing a role, especially the

presence of anaerobic conditions and high populations of the required microorganisms(1,2). In certain flooded soils, DDT is readily degraded with complete degradation in one soil in approximately 31 days(3). Degradation has been demonstrated in soils under anaerobic conditions, while little or no degradation was observed under aerobic conditions(1,2,4). Various amendments to soils such as energy and carbon sources, were shown to increase degradation under anaerobic but not aerobic conditions(1,4,5). Reported half-lives for DDT in soils range from 2 years to > 15 years(6-9). Using a river-die away test, no change in DDT concentration was found in raw river water over a period of 8 weeks(10). DDT incubated in 6 lake water samples was converted to DDD (1,1'-bis(p-chlorophenyl)-2,2-dichloroethane), with greater conversion in samples with large amounts of plankton - up to 95% conversion in one sample(1). Six marine water samples showed poor metabolic activity with respect to DDT degradation(11). DDT degradation of up to 67% in sediments in up to 24 weeks has been reported(12). DDT is apparently co-metabolized by microorganisms and is not used as a sole carbon source(1). Products of biodegradation include DDD and DDE (1,1'-bis(p-chlorophenyl)-2,2-dichloroethylene); occasionally DBP (4,4'-dichlorobenzophenone) is formed appreciably(1,2).

Bioaccumulative potential

The following BCF values have been reported for aquatic organisms: 600 to 84,500, fish(1,2); 51,000 to 100,000, fathead minnows(3,4). Bioconcentration factors of 5,100-24,400 were measured for carp exposed to 1 ug/L of DDT over a 10 week incubation period and BCF values of 6,080-25,900 were measured for carp exposed to 0.1 ug/L(5). According to a classification scheme(6), these BCF values suggest bioconcentration in aquatic organisms is very high(SRC).

Mobility in soil

The Koc of DDT ranges from 1.13X10+5(1) to 3.5X10+5(2). According to a classification scheme(3), these Koc values suggest that DDT 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: 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

Listed.

China Catalog of Hazardous chemicals 2015

Listed.

New Zealand Inventory of Chemicals (NZIoC)

Not Listed.

(PICCS)

Listed.

Vietnam National Chemical Inventory

Not 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?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. Carrier solvents used in commercial formulations may change physical and toxicological properties. Do NOT take working clothes home. Consult national legislation.

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