Chemical Safety Data Sheet MSDS / SDS

N-(trichloromethylthio)phthalimide 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: N-(trichloromethylthio)phthalimide

CAS: 133-07-3

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

Eye irritation, Category 2
Skin sensitization, Category 1

Acute toxicity - Category 4, Inhalation
Carcinogenicity, Category 2
Hazardous to the aquatic environment, short-term (Acute) - Category Acute 1

GHS label elements, including precautionary statements

Pictogram(s)

Signal word Warning

Hazard statement(s)

H319 Causes serious eye irritation
H317 May cause an allergic skin reaction
H332 Harmful if inhaled
H351 Suspected of causing cancer
H400 Very toxic to aquatic life

Precautionary statement(s)

Prevention

P264 Wash ... thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
P272 Contaminated work clothing should not be allowed out of the workplace.
P271 Use only outdoors or in a well-ventilated area.
P203 Obtain, read and follow all safety instructions before use.
P273 Avoid release to the environment.

Response

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P302+P352 IF ON SKIN: Wash with plenty of water/...
P333+P317 If skin irritation or rash occurs: Get medical help.
P321 Specific treatment (see ... on this label).
P362+P364 Take off contaminated clothing and wash it before reuse.
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P317 Get medical help.
P318 IF exposed or concerned, get medical advice.

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:	N-(trichloromethylthio)phthalimide
Common names and synonyms:	N-(trichloromethylthio)phthalimide
CAS number:	133-07-3
EC number:	205-088-6
Concentration:	100%

SECTION 4: First aid measures

Description of necessary 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. Seek medical attention if you feel unwell.

Following eye contact

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

Following ingestion

Rinse mouth. Seek medical attention if you feel unwell.

Most important symptoms/effects, acute and delayed

Excerpt from ERG Guide 171 [Substances (Low to Moderate Hazard)]: Inhalation of material may be harmful. Contact may cause burns to skin and eyes. Inhalation of Asbestos dust may have a damaging effect on the lungs. Fire may produce irritating, corrosive and/or toxic gases. Some liquids produce vapors that may cause dizziness or suffocation. Runoff from fire control may cause pollution. (ERG, 2016)

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

Skin decontamination: Skin contamination should he treated promptly by washing with soap and water. Contamination of the eyes should be treated immediately by prolonged flushing of the eyes with large amounts of clean water. If dermal or ocular irritation persists, medical attention should be, obtained without delay. Herbicides

SECTION 5: Firefighting measures

Suitable extinguishing media

Extinguishing Media: In case of small fire: foam or dry chemical, carbon dioxide. In case of large fire: water spray, fog or regular foam. Folpan 80 WDG Fungicide

Specific hazards arising from the chemical

Excerpt from ERG Guide 171 [Substances (Low to Moderate Hazard)]: Some may burn but none ignite readily. Containers may explode when heated. Some may be transported hot. For UN3508, be aware of possible short circuiting as this product is transported in a charged state. (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: protective gloves and chemical protection suit. Do NOT let this chemical enter the environment. Sweep spilled substance into covered containers. If appropriate, moisten first to prevent dusting. Carefully collect remainder. Then store and dispose of according to local regulations.

Environmental precautions

Personal protection: protective gloves and chemical protection suit. Do NOT let this chemical enter the environment. Sweep spilled substance into covered 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

Do not contaminate water by cleaning of equipment or disposal of rinsate. Folpan 80 WDG Fungicide

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. Store in an area without drain or sewer access. Separated from food and feedstuffs.Store in dry place at ambient or lower temperatures.

SECTION 8: Exposure controls/personal protection

Control parameters

Occupational Exposure limit values

TLV: (inhalable fraction): 1 mg/m3, as TWA; (SEN); A3 (confirmed animal carcinogen with unknown relevance to humans)

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 spectacles.

Skin protection

Protective gloves. Protective clothing.

Respiratory protection

Use ventilation (not if powder).

Thermal hazards

no data available

SECTION 9: Physical and chemical properties and safety characteristics

Physical state:	Folpet is a white crystals. Used as a fungicide. Insoluble in water.
Colour:	Crystals from benzene
Odour:	no data available
Melting point/freezing point:	177-180°C
Boiling point or initial boiling point and boiling range:	333.8°C
Flammability:	Combustible under specific conditions. Liquid formulations containing organic solvents may be flammable. Gives off irritating or toxic fumes (or gases) in a fire.
Lower and upper explosion limit/flammability limit:	no data available

Flash point:	155.7°C
Auto-ignition temperature:	no data available
Decomposition temperature:	no data available
pH:	no data available
Kinematic viscosity:	no data available
Solubility:	In carbon tetrachloride 6, toluene 26, methanol 3 (all in g/L at 25 deg C)
Partition coefficient n-octanol/water:	log Kow = 2.85
Vapour pressure:	0.000133mmHg at 25°C
Density and/or relative density:	1.74 g/cm3
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 sulfur oxides, nitrogen oxides and hydrogen chloride (see ICSC 0163).

Chemical stability

Virtually non-volatile; stable when dry, but slowly hydrolyzes in water at ordinary temp, rapidly @ high temp or under alkaline conditions

Possibility of hazardous reactions

A halogenated phthalimide.

Conditions to avoid

no data available

Incompatible materials

Incompatible with strongly alkaline material.

Hazardous decomposition products

When heated to decomp it emits very toxic fumes of /hydrogen chloride, nitrogen oxides & sulfur oxides/.

SECTION 11: Toxicological information

Acute toxicity

Oral: LD50 Rat oral 7540 mg/kg

Inhalation: LC50 Rat inhalation >1.89 mg/l/4 hr

Dermal: LD50 Rabbit (albino) percutaneous >22,600 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: Group B2 Probable Human

Reproductive toxicity

no data available

STOT-single exposure

The substance is irritating to the eyes.

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 gastrointestinal tract. Tumours have been detected in experimental animals but may not be relevant to humans.

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: Oncorhynchus mykiss (Rainbow Trout) fingerling; Conditions: freshwater, flow through, 12 deg C, pH 7.5, hardness 314 mg/L CaCO3; Concentration: 74.0 ug/L for 24 hr (95% confidence interval: 68.6-79.9 ug/L) /88% purity technical material

Toxicity to daphnia and other aquatic invertebrates: EC50; Species: Daphnia magna (Water Flea) 1st instar larvae; Conditions: freshwater, static; Concentration: 85 ug/L for 24 hr (95% confidence interval: 75-97 ug/L); Effect: intoxication, immobilization /87.5% purity

Toxicity to algae: EC50; Species: Scenedesmus subspicatus (Green Algae); Conditions: freshwater, static; Concentration: 100 ug/L for 96 hr; Effect: population abundance /87.5% purity

Toxicity to microorganisms: no data available

Persistence and degradability

AEROBIC: A first-order half-life of 75.4 days was measured for the degradation of radio-labeled folpet, applied at 10 ug/L to Georgia sandy loam soil. The degradation pattern was described to be biphasic, with rapid degradation occurring between days 0-

14 and slower degradation occurring between days 14-365 post-treatment. The Environmental Protection Agency calculated an integrated first-order half-life of 2.55 days using non-linear regression on the non-transformed data. An earlier study measured a half-life of 2.4 days with 74% of the applied radioactivity detected as 14CO2 at 7 days post-treatment for the degradation of radiolabeled folpet applied at 5.92 ppm to a sandy loam soil. Degradation products are carbon dioxide, phthalimide and phthalic acid(1).

Bioaccumulative potential

Bioconcentration factors (BCFs) of 19, 61, and 81 were determined for the fillet, whole fish, and viscera, respectively, in bluegill sunfish (Lepomis macrochirus)(1) using radiolabeled folpet at 10 ug/L. These bioconcentration factors are based on total radiolabeled residues and not specifically folpet residues. According to a classification scheme(2), this BCF range, based on total residues, suggests bioconcentration of folpet and its metabolites in aquatic organisms is low to moderate. The accumulated residues were eliminated over 7 days(1).

Mobility in soil

Koc values of 7.47 to 21.9 have been reported for folpet(1). According to a classification scheme(2), this estimated Koc value suggests that folpet is expected to have very high mobility 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: UN3077 (For reference only, please check.)
IMDG: UN3077 (For reference only, please check.)
IATA: UN3077 (For reference only, please check.)

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.)

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.)

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

Not Listed.

New Zealand Inventory of Chemicals (NZIoC)

Listed.

(PICCS)

Listed.

Vietnam National Chemical Inventory

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

If the pesticide is present under the form of a formulation containing hydrocarbon solvents, vomiting may not be induced. If the substance is formulated with solvent(s) also consult the card(s) (ICSC) of the solvent(s). Carrier solvents used in commercial formulations may change physical and toxicological properties.