Chemical Safety Data Sheet MSDS / SDS

# Dinoterb 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: Dinoterb

CAS: 1420-07-1

### 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 2, 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
Reproductive toxicity, Category 1B

**GHS label elements, including precautionary statements**

Pictogram(s)

Signal word Danger

**Hazard statement(s)**

H300 Fatal 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.
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.
P391 Collect spillage.
P318 IF exposed or concerned, get medical advice.

**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: | Dinoterb |
| Common names and synonyms: | Dinoterb |
| CAS number: | 1420-07-1 |
| EC number: | 215-813-8 |
| Concentration: | 100% |

## SECTION 4: First aid measures

### Description of necessary first-aid measures

### If inhaled

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

### Following skin contact

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

### Following eye contact

Rinse with pure water for at least 15 minutes. Consult a doctor.

### Following ingestion

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

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

This compound is toxic by all routes of exposure. The dangerous single oral dose of dinitro-o- cresol, a structurally similar compound, is estimated to be about 29 mg/kg. (EPA, 1998)

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

Supportive treatment and hyperthermia control. There is no specific antidote to poisoning with nitrophenolic or nitrocresolic herbicides. Treatment is supportive in nature and includes oxygen, fluid replacement, and temperature control. Reduce elevated body temperature by physical means. Administer sponge baths and ice packs, and use a fan to promote air flow and evaporation.7 In fully conscious patients, administer cold, sugar-containing liquids by mouth as tolerated. Nitrophenolic and nitrocresolic herbicides

## SECTION 5: Firefighting measures

### Suitable extinguishing media

If material on fire or involved in fire: Do not extinguish unless flow can be stopped. Use water in flooding quantities as fog. Solid streams of water may be ineffective. Cool all affected containers with flooding quantities of water. Apply water from as far a distance as possible. Use foam, carbon dioxide, or dry chemical. Dinitrophenol solution

### Specific hazards arising from the chemical

When heated to decomposition it emits toxic nitrogen oxide fumes. (EPA, 1998)

### Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours.Avoid contacting with skin and eye. Use personal protective equipment.Wear chemical impermeable gloves. Ensure adequate ventilation.Remove all sources of ignition. Evacuate personnel to safe areas.Keep people away from and upwind of spill/leak.

### Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

### Methods and materials for containment and cleaning up

Water spill: Use natural barriers or oil spill control booms to limit spill travek. Use surface active agent (eg detergent, soaps, alcohols) if approved by EPA. Inject "universal" gelling agent to solidify encircled spill and increase effectiveness of booms. If dissolved, in region of 10 ppm or greater concentration, apply activated carbon at ten times the spilled amount. Use mechanical dredges or lifts to remove immobilized masses of pollutants and precipitates. Dinitrophenol solutions

## 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

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

## 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 tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

### Skin protection

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

### Respiratory protection

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

### Thermal hazards

no data available

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

| | |
|---|---|
| Physical state: | Dinoterb is a yellow solid. Used as a herbicide and a rodenticide. (EPA, 1998) |
| Colour: | Pale yellow solid |
| Odour: | Phenol-like |
| Melting point/freezing point: | 125.5-126.5°C |
| Boiling point or initial boiling point and boiling range: | 304.2°C at 760 mmHg |
| Flammability: | no data available |
| Lower and upper explosion limit/flammability limit: | no data available |
| Flash point: | 125°C |
| Auto-ignition temperature: | no data available |

| | |
|---|---|
| Decomposition temperature: | no data available |
| pH: | no data available |
| Kinematic viscosity: | no data available |
| Solubility: | In water, 4.5 mg/L at pH 5, 20 deg C |
| Partition coefficient n-octanol/water: | log Kow = 3.64 (est) |
| Vapour pressure: | 0.000493mmHg at 25°C |
| Density and/or relative density: | 1.347 g/cm3 |
| Relative vapour density: | no data available |
| Particle characteristics: | no data available |

## SECTION 10: Stability and reactivity

### Reactivity

Slightly soluble in water.

### Chemical stability

Stable in neutral, acidic and alkaline media.

### Possibility of hazardous reactions

Nitrophenolates, such as DINOTERB, range from slight to strong oxidizing agents. If mixed with reducing agents, including hydrides, sulfides and nitrides, they may begin a vigorous reaction that culminates in a detonation. The aromatic nitro compounds may explode in the presence of a base such as sodium hydroxide or potassium hydroxide even in the presence of water or organic solvents. The explosive tendencies of aromatic nitro compounds are increased by the presence of multiple nitro groups. Severe explosion hazard when dry.

### Conditions to avoid

no data available

### Incompatible materials

no data available

### Hazardous decomposition products

Toxic oxides of nitrogen are produced during combustion of this material. Dinitrophenol solution

## SECTION 11: Toxicological information

### Acute toxicity

Oral: no data available

Inhalation: no data available

Dermal: LD50 Guinea pig percutaneous 150 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

no data available

### STOT-repeated exposure

no data available

### 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: EC50; Species: Scenedesmus subspicatus (Green Algae); Conditions: freshwater, static; Concentration: 18600 ug/L for 49-79 min; Effect: population, decreased photosynthesis /100% purity

Toxicity to microorganisms: no data available

### Persistence and degradability

AEROBIC: In a mono-pesticide solid aqueous suspension biodegradation test, with a starting concentration of 20 mg/L, dinoterb had a half-life of 68 days(1). When mixed with other pesticides in the same test the half-life increased to 198 days. In a mono-pesticide unsaturated soil batch biodegradation test dinoterb had a half-life of 46 days(1).

### Bioaccumulative potential

A BCF of 25 was reported for dinoterb, test conditions not specified(1). According to a classification scheme(2), this BCF value suggests bioconcentration in aquatic organisms is low(SRC).

### Mobility in soil

The Koc of dinoterb has been reported to be 98, measured in alluvial sandy soil (7.8% clay, 30% silt, 62.2% sand, 0.64% organic carbon)(1). According to a classification scheme(2), this Koc value suggests that dinoterb is expected to have high mobility in soil. The pKa values of 4.8(3) and 5.0(4) indicate that this compound will exist almost entirely in the anion form in the environment and anions generally do not adsorb more strongly to soils containing organic carbon and clay than their neutral counterparts(5).

### 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: UN2780 (For reference only, please check.)
IMDG: UN2780 (For reference only, please check.)
IATA: UN2780 (For reference only, please check.)

### UN Proper Shipping Name

ADR/RID: SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash point less than 23 °C (For reference only, please check.)
IMDG: SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash point less than 23 °C (For reference only, please check.)

IATA: SUBSTITUTED NITROPHENOL PESTICIDE, LIQUID, FLAMMABLE, TOXIC, flash point less than 23 °C (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: 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**

Not 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/