

1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Dinoseb
Product Number : B8387
Brand : Sigma
Company : Sigma-Aldrich
3050 Spruce Street
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USA
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Formula : C₁₀H₁₂N₂O₅
Molecular Weight : 240.2 g/mol

CAS-No.	EC-No.	Index-No.	Concentration
Dinoseb			
88-85-7	201-861-7	609-025-00-7	-

3. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards

Target Organ Effect, Highly toxic by ingestion, Highly toxic by skin absorption, Irritant

Target Organs

Kidney, Liver

HMIS Classification

Health Hazard: 3
Chronic Health Hazard: *
Flammability: 1
Physical hazards: 0

NFPA Rating

Health Hazard: 3
Fire: 1
Reactivity Hazard: 0

Health Hazard: 3
Fire: 0

Reactivity Hazard: 0

Potential Health Effects

Inhalation	May be harmful if inhaled. Causes respiratory tract irritation.
Skin	Causes skin irritation. May be fatal if absorbed through skin.
Eyes	Causes eye irritation.
Ingestion	May be fatal if swallowed.

4. FIRST AID MEASURES

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Flammable properties

Flash point > 100.00 °C (> 212.00 °F)

Ignition temperature no data available

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions

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

Methods for cleaning up

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

Storage

Keep container tightly closed in a dry and well-ventilated place. Store in cool place.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection

Handle with gloves.

Eye protection

Face shield and safety glasses

Skin and body protection

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form crystalline

Colour orange

Safety data

pH no data available

Melting point 40 - 42 °C (104 - 108 °F)

Boiling point 184 °C (363 °F) at 1,013 hPa (760 mmHg)

Flash point > 100.00 °C (> 212.00 °F)

Ignition temperature no data available

Lower explosion limit no data available

Upper explosion limit no data available

Water solubility insoluble

10. STABILITY AND REACTIVITY

Storage stability

Stable under recommended storage conditions.

Materials to avoid

Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx)

Hazardous decomposition products formed under fire conditions. - Nature of decomposition products not known.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

LD50 Oral - rat - 25 mg/kg

Remarks: Behavioral:Somnolence (general depressed activity). Behavioral:Convulsions or effect on seizure threshold. Lungs, Thorax, or Respiration:Respiratory stimulation.

LD50 Oral - rat - 40 mg/kg

LD50 Dermal - rabbit - 80 mg/kg

Irritation and corrosion

Eyes - rabbit - Severe eye irritation

Sensitisation

no data available

Chronic exposure

Carcinogenicity - mouse - Oral

Tumorigenic:Equivocal tumorigenic agent by RTECS criteria. Lungs, Thorax, or Respiration:Tumors. Liver:Tumors.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Genotoxicity in vitro - Ames test - Equivocal evidence.

Developmental Toxicity - mouse - Intraperitoneal

Specific Developmental Abnormalities: Central nervous system. Specific Developmental Abnormalities: Musculoskeletal system.

Developmental Toxicity - mouse - Intraperitoneal

Specific Developmental Abnormalities: Craniofacial (including nose and tongue). Specific Developmental Abnormalities: Endocrine system. Specific Developmental Abnormalities: Urogenital system.

Developmental Toxicity - rat - Oral

Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Developmental Toxicity - mouse - Oral

Effects on Embryo or Fetus: Fetotoxicity (except death, e.g., stunted fetus).

Reproductive toxicity - rat - Oral

Paternal Effects: Spermatogenesis (including genetic material, sperm morphology, motility, and count).

Reproductive toxicity - rat - Oral

Paternal Effects: Testes, epididymis, sperm duct. Effects on Fertility: Female fertility index (e.g., # females pregnant per # sperm positive females; # females pregnant per # females mated). Effects on Fertility: Male fertility index (e.g., # males impregnating females per # males exposed to fertile nonpregnant females).

Signs and Symptoms of Exposure

Absorption into the body leads to the formation of methemoglobin which in sufficient concentration causes cyanosis. Onset may be delayed 2 to 4 hours or longer.

Potential Health Effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.
Skin Causes skin irritation. May be fatal if absorbed through skin.
Eyes Causes eye irritation.
Ingestion May be fatal if swallowed.
Target Organs Kidney, Liver,

Additional Information
RTECS: SJ9800000

12. ECOLOGICAL INFORMATION

Elimination information (persistence and degradability)

Bioaccumulation Pimephales promelas (fathead minnow) - 24 d
Bioconcentration factor (BCF): 64.1

Ecotoxicity effects

Toxicity to fish mortality LOEC - Salmo salar (Atlantic salmon) - 0.07 mg/l - 96 h
Toxicity to daphnia and other aquatic invertebrates. LC50 - Daphnia magna (Water flea) - 0.24 mg/l - 48 h
Toxicity to algae mortality LOEC - Chlamydomonas moewusii - 19.22 mg/l - 7 d
mortality NOEC - Chlamydomonas moewusii - 14.41 mg/l - 7 d

Further information on ecology

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

13. DISPOSAL CONSIDERATIONS

Product

Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN-Number: 2811 Class: 6.1 Packing group: II
Proper shipping name: Toxic solids, organic, n.o.s.
Marine pollutant: Marine pollutant
Poison Inhalation Hazard: No

IMDG

UN-Number: 2811 Class: 6.1 Packing group: II EMS-No: F-A, S-A
Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S.
Marine pollutant: Marine pollutant

IATA

UN-Number: 2811 Class: 6.1 Packing group: II
Proper shipping name: Toxic solid, organic n.o.s.

15. REGULATORY INFORMATION

OSHA Hazards

Target Organ Effect, Highly toxic by ingestion, Highly toxic by skin absorption, Irritant

DSL Status

All components of this product are on the Canadian DSL list.

SARA 302 Components

	CAS-No.	Revision Date
Dinoseb	88-85-7	1993-04-24

SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components

	CAS-No.	Revision Date
Dinoseb	88-85-7	1993-04-24

Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Dinoseb	88-85-7	1993-04-24

New Jersey Right To Know Components

	CAS-No.	Revision Date
Dinoseb	88-85-7	1993-04-24

California Prop. 65 Components

	CAS-No.	Revision Date
WARNING! This product contains a chemical known in the State of California to cause birth defects or other reproductive harm. Dinoseb	88-85-7	2008-06-17

16. OTHER INFORMATION

Further information

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