Dinoseb

sc-257368

Material Safety Data Sheet

Hazard Alert Code Key: EXTREME | HIGH | MODERATE | LOW

Section 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

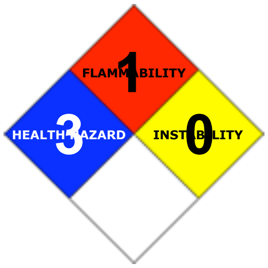
PRODUCT NAME

Dinoseb

STATEMENT OF HAZARDOUS NATURE

CONSIDERED A HAZARDOUS SUBSTANCE ACCORDING TO OSHA 29 CFR 1910.1200.

NFPA



SUPPLIER

Santa Cruz Biotechnology, Inc.
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Santa Cruz, California 95060
800.457.3801 or 831.457.3800

EMERGENCY

ChemWatch
Within the US & Canada: 877–715–9305
Outside the US & Canada: +800 2436 2255
(1–800-CHEMCALL) or call +613 9573 3112

SYNONYMS

C10-H12-N2-O5, "phenol, 2-sec-butyl-4, 6-dinitro-", Aretit, Basanite, Butaphene, "BNP 30", Caldon, Chemox, Dinitro-3, "4, 6-dinitro-2-sec-butylphenol", dinitrobutylphenol, "2, 4-dinitro-6-sec-butylphenol", "4, 6-dinitro-o-sec-butylphenol", "2, 4-dinitro-6-(1-methylpropyl)phenol", "4, 6-dinitro-2-(1-methyl-n-propyl)phenol", dinosebe, "6-(1-methylpropyl)-2, 4-dinitrophenol", DNBP, DNPSBP, DNSP, "Dow General Weed Killer", Elgetol, Gebutox, Hel-Fire, Ivosit, Kiloseb, "Nitropone C", Phenotan, Premerge, "Sinox General", Sparic, Spurge, Subitex, Unicrop, "Vertac Dinitro Weed Killer, General Weed Killer, Selective Weed Killer"

Section 2 - HAZARDS IDENTIFICATION

CHEMWATCH HAZARD RATINGS

		Min	Max
Flammability:	1		
Toxicity:	3		
Body Contact:	3		
Reactivity:	2		
Chronic:	3		

Min/Nil=0
Low=1
Moderate=2
High=3
Extreme=4

CANADIAN WHMIS SYMBOLS

EMERGENCY OVERVIEW

RISK

Heating may cause an explosion.
Danger of cumulative effects.
Irritating to eyes.
Limited evidence of a carcinogenic effect.
May cause harm to the unborn child.
Possible risk of impaired fertility.
Toxic by inhalation, in contact with skin and if swallowed.
Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Risk of explosion if heated under confinement.

POTENTIAL HEALTH EFFECTS

ACUTE HEALTH EFFECTS

SWALLOWED

■ Toxic effects may result from the accidental ingestion of the material; animal experiments indicate that ingestion of less than 40 gram may be fatal or may produce serious damage to the health of the individual.
■ The substance and/or its metabolites may bind to hemoglobin inhibiting normal uptake of oxygen.
This condition, known as "methemoglobinemia", is a form of oxygen starvation (anoxia).
■ Symptoms of dinitrophenol poisoning include a rapid increase in body temperature, breathing rate and heart rate.
Oxygen demand is raised even faster, causing oxygen deficiency and acid-base imbalance (acidosis) to occur.

EYE

■ There is evidence that material may produce eye irritation in some persons and produce eye damage 24 hours or more after instillation.
Severe inflammation may be expected with pain.

SKIN

■ Skin contact with the material may produce toxic effects; systemic effectsmay result following absorption.
■ The material is not thought to be a skin irritant (as classified using animal models).
Abrasive damage however, may result from prolonged exposures.
■ Open cuts, abraded or irritated skin should not be exposed to this material.
■ Entry into the blood-stream, through, for example, cuts, abrasions or lesions, may produce systemic injury with harmful effects.
Examine the skin prior to the use of the material and ensure that any external damage is suitably protected.

INHALED

■ The material is not thought to produce respiratory irritation (as classified using animal models).
Nevertheless inhalation of dusts, or fume, especially for prolonged periods, may produce respiratory discomfort and occasionally, distress.
■ Persons with impaired respiratory function, airway diseases and conditions such as emphysema or chronic bronchitis, may incur further disability if excessive concentrations of particulate are inhaled.
■ Inhalation of vapors or aerosols (mists, fumes), generated by the material during the course of normal handling, may produce toxic effects.

CHRONIC HEALTH EFFECTS

■ Repeated or long-term occupational exposure is likely to produce cumulative health effects involving organs or biochemical systems.
There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment.
Ample evidence exists, from results in experimentation, that developmental disorders are directly caused by human exposure to the material.
Ample evidence from experiments exists that there is a suspicionthis material directly reduces fertility.
There is limited evidence that, skin contact with this product is more likely to cause a sensitization reaction in some persons compared to the general population.
Long term exposure to high dust concentrations may cause changes in lung function i.e. pneumoconiosis; caused by particles less than 0.5 micron penetrating and remaining in the lung.
2,4-dinitrophenol can cause skin eruption, peripheral nerve damage, liver and kidney damage, and rarely cataracts. Repeated or prolonged contact may produce an allergic or irritant inflammation of the skin.
Exposure over a long period of time to nitrophenols may produce kidney and liver damage. Inflammation of the colon, intestine, liver, stomach, and enlargement of the spleen may occur.
The US EPA has determined that an adequate margin of safety does NOT exist between the use of dinoseb and the potential effects of inducing birth defects or producing sterility in man. Studies with laboratory animals suggest that dinoseb has the potential to affect the immunological system.
Dinoseb induced liver tumours in female mice in long term studies.
Dinseb is teratogenic and embryotoxic in mice and rats when given by intraperitoneal injection, but not when given in sub-lethal oral doses.
Adverse developmental effects include anomalies of the neurological and skeletal systems, adverse male reproductive effects and decreased reproductive performance and foetal viability in animals.

Section 3 - COMPOSITION / INFORMATION ON INGREDIENTS

NAME	CAS RN	%
dinoseb	88-85-7	>98

Section 4 - FIRST AID MEASURES

SWALLOWED

· Give a slurry of activated charcoal in water to drink. NEVER GIVE AN UNCONSCIOUS PATIENT WATER TO DRINK. · At least 3 tablespoons in a glass of water should be given.

EYE

■ If this product comes in contact with the eyes: · Immediately hold eyelids apart and flush the eye continuously with running water. · Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

SKIN

■ If skin or hair contact occurs: · Quickly but gently, wipe material off skin with a dry, clean cloth. · Immediately remove all contaminated clothing, including footwear.

INHALED

· If fumes or combustion products are inhaled remove from contaminated area. · Lay patient down. Keep warm and rested.

NOTES TO PHYSICIAN

■ Symptoms of vasodilation and reflex tachycardia may present following organic nitrate overdose; most organic nitrates are extensively metabolized by hydrolysis to inorganic nitrites. Organic nitrates and nitrites are readily absorbed through the skin, lungs, mucosa and gastro-intestinal tract.
Marked fatigue, tremendous thirst, profuse sweating, flushing of the face are all characteristics of intoxication by dinitrophenol derivatives. These may be followed by restlessness, anxiety, excitement which may occasionally lead to convulsions.
The toxicity of nitrates and nitrites result from their vasodilating properties and their propensity to form methemoglobin.
· Most produce a peak effect within 30 minutes.
· Clinical signs of cyanosis appear before other symptoms because of the dark pigmentation of methemoglobin.
Metabolites include butanoic acid: 2-sec-butyl-4-nitro-6-aminophenol:
2-sec-butyl-4-acetamido-6-nitrophenol: and
2-(3,5-dinitro-2-hydroxyphenyl)-2-methylpropanoic acid.
Following oral administration to rats approximately 25% of the dose appeared in faeces; in mice 20% was excreted in the urine and 30% in the faeces.

Section 5 - FIRE FIGHTING MEASURES

Vapor Pressure (mmHg):	0.998 @ 152 C
Upper Explosive Limit (%):	Not available
Specific Gravity (water=1):	1.265 @ 45 C
Lower Explosive Limit (%):	Not available

EXTINGUISHING MEDIA

· Foam.
· Dry chemical powder.

FIRE FIGHTING

· Alert Emergency Responders and tell them location and nature of hazard.
· Wear full body protective clothing with breathing apparatus.
When any large container (including road and rail tankers) is involved in a fire,
consider evacuation by 800 metres in all directions.

GENERAL FIRE HAZARDS/HAZARDOUS COMBUSTIBLE PRODUCTS

■ WARNING: May EXPLODE on heating!!!.
· Combustible solid which burns but propagates flame with difficulty.
· Avoid generating dust, particularly clouds of dust in a confined or unventilated space as dusts may form an explosive mixture with air, and any source of ignition, i.e. flame or spark, will cause fire or explosion. Dust clouds generated by the fine grinding of the solid are a particular hazard; accumulations of fine dust may burn rapidly and fiercely if ignited.
Combustion products include: carbon monoxide (CO), carbon dioxide (CO2), nitrogen oxides (NOx), other pyrolysis products typical of burning organic material.
May emit poisonous fumes.

FIRE INCOMPATIBILITY

■ Avoid contamination with oxidizing agents i.e. nitrates, oxidizing acids,chlorine bleaches, pool chlorine etc. as ignition may result.

PERSONAL PROTECTION

Glasses:
Chemical goggles.
Gloves:
Respirator:
Particulate

Section 6 - ACCIDENTAL RELEASE MEASURES

MINOR SPILLS
· Clean up waste regularly and abnormal spills immediately.
· Avoid breathing dust and contact with skin and eyes.
· Wear protective clothing, gloves, safety glasses and dust respirator.
· Use dry clean up procedures and avoid generating dust.
· Vacuum up or sweep up. NOTE: Vacuum cleaner must be fitted with an exhaust micro filter (HEPA type) (consider explosion-proof machines designed to be grounded during storage and use).
· Dampen with water to prevent dusting before sweeping.
· Place in suitable containers for disposal.
MAJOR SPILLS
· Clear area of personnel and move upwind.
· Alert Emergency Responders and tell them location and nature of hazard.

Section 7 - HANDLING AND STORAGE

PROCEDURE FOR HANDLING

· Avoid all personal contact, including inhalation.
· Wear protective clothing when risk of exposure occurs.
Empty containers may contain residual dust which has the potential to accumulate following settling. Such dusts may explode in the presence of an appropriate ignition source.
· Do NOT cut, drill, grind or weld such containers.
· In addition ensure such activity is not performed near full, partially empty or empty containers without appropriate workplace safety authorisation or permit.

RECOMMENDED STORAGE METHODS

· Lined metal can, Lined metal pail/drum
· Plastic pail.
For low viscosity materials
· Drums and jerricans must be of the non-removable head type.
· Where a can is to be used as an inner package, the can must have a screwed enclosure.
All inner and sole packagings for substances that have been assigned to Packaging Groups I or II on the basis of inhalation toxicity criteria, must be hermetically sealed.

STORAGE REQUIREMENTS

· Store in original containers.
· Keep containers securely sealed.
Store below 4 deg.C.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE CONTROLS

The following materials had no OELs on our records

- dinoseb: CAS:88-85-7

PERSONAL PROTECTION




RESPIRATOR

Particulate

EYE

· Safety glasses with side shields.
· Chemical goggles.

HANDS/FEET

■ Wear chemical protective gloves, eg. PVC.
NOTE: The material may produce skin sensitization in predisposed individuals. Care must be taken, when removing gloves and other protective equipment, to avoid all possible skin contact.
Suitability and durability of glove type is dependent on usage. Important factors in the selection of gloves include: such as:
· frequency and duration of contact,
· chemical resistance of glove material,
· glove thickness and
· dexterity

Select gloves tested to a relevant standard (e.g. Europe EN 374, US F739).
· When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended.
· When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.
· Contaminated gloves should be replaced.
Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturiser is recommended.

OTHER

· Overalls.
· Eyewash unit.

ENGINEERING CONTROLS

· Local exhaust ventilation is required where solids are handled as powders or crystals; even when particulates are relatively large, a certain proportion will be powdered by mutual friction.
· Exhaust ventilation should be designed to prevent accumulation and recirculation of particulates in the workplace.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL PROPERTIES

Solid.
Does not mix with water.
Sinks in water.

State	Divided solid	Molecular Weight	240.24
Melting Range (°F)	100- 108	Viscosity	Not Applicable
Boiling Range (°F)	156- 163	Solubility in water (g/L)	Partly miscible
Flash Point (°F)	351	pH (1% solution)	<7
Decomposition Temp (°F)	Not Available	pH (as supplied)	Not applicable
Autoignition Temp (°F)	Not available	Vapor Pressure (mmHg)	0.998 @ 152 C
Upper Explosive Limit (%)	Not available	Specific Gravity (water=1)	1.265 @ 45 C
Lower Explosive Limit (%)	Not available	Relative Vapor Density (air=1)	Not Applicable
Volatile Component (%vol)	Negligible	Evaporation Rate	Not Applicable

dinoseb	
log Kow (Sangster 1997):	3.69

APPEARANCE

Yellow-orange, waxy, crystalline solid with pungent odour; does not mix well with water (52 mg/l). Soluble in alcohol, ether, toluene, xylene, n-heptane, petroleum oils and most organic solvents.

log Kow 3.69

Material	Value

Section 10 - CHEMICAL STABILITY

CONDITIONS CONTRIBUTING TO INSTABILITY

· Presence of incompatible materials.
· Product is considered stable.

STORAGE INCOMPATIBILITY

· Polynitro derivatives of mono- and poly- cyclic systems are often explosives liable to detonate on grinding or impact.
· The presence of two or more nitro groups (each with 2 oxygen atoms) on an aromatic nucleus often increase the reactivity of other substituents and the tendency towards explosive instability as oxygen balance is approached.
· Aromatic nitro compounds 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 explosive tendencies of aromatic nitro compounds are increased by the presence of multiple nitro groups.
· In view of the reports of previous violent or explosive reactions, heating of polynitroaryl (particularly di- and tri-nitroaryl) compounds with alkalies, ammonia, or O-ethylsulfuric acid salts, in autoclaves should be avoided.
· Nitroaromatic and in particular polynitroaromatic compounds may present a severe explosion risk if subjected to shock or heated rapidly and uncontrollably as in fire situations. In addition, when such compounds are heated more moderately with caustic alkalies, even when water or organic solvents are present, there is also a risk of violent decomposition or explosion. Several industrial accidents, which probably were due to such interactions, have occurred; this potential hazard often remains unacknowledged.
· A range of exothermic decomposition energies for nitro compounds is given as 220-410 kJ/mol. The relationship between energy of decomposition and processing hazards has been the subject of discussion; it is suggested that values of energy released per unit of mass, rather than on a molar basis (J/g) be used in the assessment. For example, in "open vessel processes" (with man-hole size openings, in an industrial setting), substances with exothermic decomposition energies below 500 J/g are unlikely to present a danger, whilst those in "closed vessel processes" (opening is a safety valve or bursting disk) present some danger where the decomposition energy exceeds 150

J/g.
BRETHERICK: Handbook of Reactive Chemical Hazards, 4th Edition
.
Nitrophenols are:
- combustible solids which may form explosive mixtures with air when finely divided
- strong oxidisers which react violently with reducing agents
- reactive with combustible, organic and other easily oxidisable materials
- thermally unstable burning in the absence o air causing fast pressure rises; closed containers may explode
- able to form shock-sensitive explosive mixtures with chlorine trifluoride
- incompatible with strong acids, caustics, aliphatic amines, amides, diethylamine, potassium hydride, potassium hydroxide.
- Phenols are incompatible with strong reducing substances such as hydrides, nitrides, alkali metals, and sulfides.
- Avoid use of aluminium, copper and brass alloys in storage and process equipment.
- Heat is generated by the acid-base reaction between phenols and bases.
- Phenols are sulfonated very readily (for example, by concentrated sulfuric acid at room temperature), these reactions generate heat.
- Phenols are nitrated very rapidly, even by dilute nitric acid.
- Nitrated phenols often explode when heated. Many of them form metal salts that tend toward detonation by rather mild shock.

Avoid strong acids.
Avoid reaction with oxidizing agents.
Segregate from heavy metals and their salts.

For incompatible materials - refer to Section 7 - Handling and Storage.

Section 11 - TOXICOLOGICAL INFORMATION

dinoseb

TOXICITY AND IRRITATION

DINOSEB:
■ unless otherwise specified data extracted from RTECS - Register of Toxic Effects of Chemical Substances.

TOXICITY	IRRITATION
Oral (rat) LD50: 25 mg/kg	Eye (rabbit): 50 mg/24h - SEVERE
Dermal (rat) LD50: 80 mg/kg	
Dermal (rabbit) LD50: 80 mg/kg	

■ For dinoseb
Acute toxicity: Dinoseb is highly toxic by ingestion and by skin exposure. Dinoseb did not cause skin irritation in rabbits . Inhalation of dusts and sprays may be irritating to the lungs and eyes, and may cause serious illness; direct skin contact may cause irritation, yellow stains, burns, and dermatitis, and more serious effects in humans . In one fatal incident, a farm worker was using a backpack hand-held sprayer that leaked dinoseb onto his body and penetrated his skin . Symptoms in persons receiving accidental exposure include fatigue, thirst, sweating, insomnia, weight loss, headache, flushing of the face, nausea, abdominal pain, and occasional diarrhea . In one case, some of these persisted for several months following exposure .
Chronic toxicity: Dinoseb interferes with cellular conversion of food molecules (such as glucose) into useable energy for the body . Specifically, it disturbs the production of adenosine triphosphate (ATP) in the mitochondria of the cells, ATP being the molecule that provides energy for all cellular activities. This may account for many of the toxic effects caused by dinoseb. Dietary levels of about 25 mg/kg/day caused marked food refusal in animal experiments and some deaths after five or more doses . Lower doses (5 to 20 mg/kg/day) caused statistically significant decreases in growth . Some formulations of dinoseb may cause anemia-like effects, jaundice, and increased excretion of hemoglobin-related compounds (coproporphyrinuria) .
Reproductive effects: Dinoseb is reported to adversely affect reproduction in rats and mice at levels that are commonly found among occupational workers. Decreased sperm count and abnormal sperm shape were observed in male rats and mice after 3 weeks at low exposure levels (about 10 mg/kg/day) for 30 days [84]. In a separate study, rats were exposed to relatively small quantities of dinoseb through their diet for a total of 22 weeks. Effects such as decreased fertility, slow weight gain, and poor survival of newborns appeared to be related to this pesticide. Because of the adverse effects observed in laboratory animals at low chronic exposure levels, it is believed that dinoseb may cause decreased fertility or sterility in humans .
Teratogenic effects: Low levels of dinoseb fed to rats and rabbits caused birth defects in the foetuses of exposed females . When dinoseb was administered to pregnant mice, its breakdown products were found in the embryos. However, no teratogenic effects were noted. Various tests of mice and rats fed or injected with small amounts of dinoseb (around 10 mg/kg/day) have shown maternal toxicity, decreased fetal body weights and changes in foetal development . In some studies of mice, oral doses to pregnant mothers caused an increased death rate in the exposed animals but caused no fetal damage . Other studies indicate that dinoseb is a stronger teratogen when injected than when ingested. At low feeding levels the compound was responsible for skeletal deformities and neurological problems in newborn rats . Based on the data, dinoseb may produce teratogenic effects in humans.
Mutagenic effects: Dinoseb was not mutagenic or genotoxic in laboratory studies performed using eukaryotic cells (the type found in mammals and other higher order species) . This evidence suggests that mutagenic effects in humans due to dinoseb exposure are unlikely.
Carcinogenic effects: Dinoseb didn't cause significant increases in tumours when administered to two strains of mice at the maximum tolerated dose over a period of 18 months . While not carcinogenic to male mice, it was found to be carcinogenic to female mice in another study . The compound caused liver cancer in these animals at moderate to high doses . The evidence regarding the carcinogenic potential of dinoseb is currently inconclusive.
Organ toxicity: Dinoseb has the potential to damage the eye. It may also affect the immune system, liver, kidneys, and spleen .
Fate in humans and animals: Dinoseb is readily absorbed through the skin, gastrointestinal tract, and lung surface . Esters of dinoseb are rapidly transformed into dinoseb, which is the active toxicant . The chemical is excreted in the urine and feces and is metabolized in the liver. Breakdown products are found in the liver, kidneys, spleen, blood, and urine . Dinoseb can also pass through the placenta into the fetus of experimental animals.
The material may produce severe irritation to the eye causing pronounced inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis.

Reproductive effector in rats.
Equivocal tumorigen by RTECS criteria

CARCINOGEN

DINITROBUTYL PHENOL	US Environmental Defense Scorecard Suspected Carcinogens	Reference(s)	OPP-CAN
VPVB_(VERY~	US - Maine Chemicals of High Concern List	Carcinogen	
VPVB_(VERY~	US - Maine Chemicals of High Concern List	Carcinogen	CA Prop 65; IARC; NTP 11th ROC

Section 12 - ECOLOGICAL INFORMATION

Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
This material and its container must be disposed of as hazardous waste.
Avoid release to the environment.
Refer to special instructions/ safety data sheets.

Ecotoxicity

Ingredient	Persistence: Water/Soil	Persistence: Air	Bioaccumulation	Mobility
dinoseb	MED	MED	LOW	MED

Section 13 - DISPOSAL CONSIDERATIONS

US EPA Waste Number & Descriptions

B. Component Waste Numbers
When dinoseb is present as a solid waste as a discarded commercial chemical product, off-specification species, as a container residue, or a spill residue, use EPA waste number P020 (waste code T).

Disposal Instructions

All waste must be handled in accordance with local, state and federal regulations.
¦ Puncture containers to prevent re-use and bury at an authorized landfill.
Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws operating in their area. In some areas, certain wastes must be tracked.
A Hierarchy of Controls seems to be common - the user should investigate:
· Reduction
· Reuse
· Recycling
· Disposal (if all else fails)
This material may be recycled if unused, or if it has not been contaminated so as to make it unsuitable for its intended use. Shelf life considerations should also be applied in making decisions of this type. Note that properties of a material may change in use, and recycling or reuse may not always be appropriate.
DO NOT allow wash water from cleaning equipment to enter drains. Collect all wash water for treatment before disposal.
· Recycle wherever possible.
· Consult manufacturer for recycling options or consult Waste Management Authority for disposal if no suitable treatment or disposal facility can be identified.

Section 14 - TRANSPORTATION INFORMATION

DOT:
Symbols: None Hazard class or Division: 6.1
Identification Numbers: UN2779 PG: II
Label Codes: 6.1 Special provisions: IB8, IP2,
IP4, T3,
TP33
Packaging: Exceptions: 153 Packaging: Non- bulk: 212
Packaging: Exceptions: 153 Quantity limitations: 25 kg
Passenger aircraft/rail:
Quantity Limitations: Cargo 100 kg Vessel stowage: Location: A
aircraft only:
Vessel stowage: Other: 40 S.M.P.: YES
Hazardous materials descriptions and proper shipping names:

Substituted nitrophenol pesticides, solid, toxic

Air Transport IATA:

ICAO/IATA Class: 6.1 ICAO/IATA Subrisk: None
UN/ID Number: 2779 Packing Group: II
Special provisions: A3
Cargo Only
Packing Instructions: 100 kg Maximum Qty/Pack: 25 kg
Passenger and Cargo Passenger and Cargo
Packing Instructions: 676 Maximum Qty/Pack: 669
Passenger and Cargo Limited Quantity Passenger and Cargo Limited Quantity
Packing Instructions: 1 kg Maximum Qty/Pack: Y644
Shipping Name: SUBSTITUTED NITROPHENOL PESTICIDE, SOLID,
TOXIC *(CONTAINS DINOSEB)

Maritime Transport IMDG:

IMDG Class: 6.1 IMDG Subrisk: None
UN Number: 2779 Packing Group: II
EMS Number: F-A , S-A Special provisions: 61 274
Limited Quantities: 500 g Marine Pollutant: Yes
Shipping Name: SUBSTITUTED NITROPHENOL PESTICIDE, SOLID, TOXIC
(contains dinoseb)

Section 15 - REGULATORY INFORMATION

dinoseb (CAS: 88-85-7) is found on the following regulatory lists;

"Canada Domestic Substances List (DSL)","Canada Environmental Quality Guidelines (EQGs) Water: Aquatic life","Canada Environmental Quality Guidelines (EQGs) Water: Community","International Chemical Secretariat (ChemSec) REACH SIN* List (*Substitute It Now!) 1.0","International Maritime Dangerous Goods Requirements (IMDG Code) - Substance Index","OECD Representative List of High Production Volume (HPV) Chemicals","US - California Air Toxics ""Hot Spots"" List (Assembly Bill 2588) Substances for which production, use or other presence must be reported","US - California Occupational Safety and Health Regulations (CAL/OSHA) - Hazardous Substances List","US - California Proposition 65 - Priority List for the Development of MADLs for Chemicals Causing Reproductive Toxicity","US - Maine Chemicals of High Concern List","US - Massachusetts Oil & Hazardous Material List","US - Pennsylvania - Hazardous Substance List","US - Texas Drinking Water Standards - Maximum Contaminant Levels (MCLs) for synthetic organic contaminants","US - Vermont Hazardous Constituents","US - Vermont Hazardous Waste - Acutely Hazardous Wastes","US - Washington Dangerous waste constituents list","US - Washington Discarded Chemical Products List - ""P"" Chemical Products","US Department of Transportation (DOT) List of Hazardous Substances and Reportable Quantities - Hazardous Substances Other Than Radionuclides","US Department of Transportation (DOT) Marine Pollutants - Appendix B","US DOE Temporary Emergency Exposure Limits (TEELs)","US EPA Carcinogens Listing","US EPA High Production Volume Program Chemical List","US EPCRA Section 313 Chemical List","US List of Lists - Consolidated List of Chemicals Subject to EPCRA, CERCLA and Section 112(r) of the Clean Air Act","US RCRA (Resource Conservation & Recovery Act) - Appendix IX to Part 264 Ground-Water Monitoring List 1","US RCRA (Resource Conservation & Recovery Act) - Hazardous Constituents - Appendix VIII to 40 CFR 261","US RCRA (Resource Conservation & Recovery Act) - List of Hazardous Inorganic and Organic Constituents 1","US RCRA (Resource Conservation & Recovery Act) - List of Hazardous Wastes","US RCRA (Resource Conservation & Recovery Act) - Phase 4 LDR Rule - Universal Treatment Standards","US SARA Section 302 Extremely Hazardous Substances","US Toxic Substances Control Act (TSCA) - Inventory","WHO Guidelines for Drinking-water Quality - Chemicals excluded from guideline value derivation"

Section 16 - OTHER INFORMATION

Reasonable care has been taken in the preparation of this information, but the author makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The author makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use. For additional technical information please call our toxicology department on +800 CHEMCALL.

■ Classification of the preparation and its individual components has drawn on official and authoritative sources as well as independent review by the Chemwatch Classification committee using available literature references.
A list of reference resources used to assist the committee may be found at:
www.chemwatch.net/references.

■ The (M)SDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

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