

Material safety data sheet

DCT

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1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: DCT

Norac Concepts Inc.
P.O. Box 31097, Guelph, ON N1H 8K1
519-821-3633

Emergency telephone number: All hours, 613-787-5620, **ONLY** for health and environmental information.

2. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous ingredients	% (w/w)	ACGIH TLV	CAS No.
Captan	18	5.0 mg/m ³	133-06-2
Thiophanate-methyl	14	Not listed	23564-05-8
Diazinon	6	0.1 mg/m ³ (skin)	333-41-5
Talc	30 – 40	2.0 mg/m ³	14807-96-6

Synonyms: Not available.

Chemical name: Diazinon: O,O-Diethyl O-(2-isopropyl-6-methyl-4-pyrimidinyl) phosphorothioate

Captan: N-trichloromethylthio-4-cyclohexene-1,2-dicarboximide.

Thiophanate-methyl: Dimethyl [(1,2-phenylene) bis-(iminocarbonothioyl)] biscalbamate

Chemical family: Organophosphorous, dicarboximide, carbamate.

Product use: Agricultural seed treatment.

Registration number: 14986 Pest Control Products Act.

3. HAZARDS IDENTIFICATION

Summary: Hazardous properties of all ingredients have been considered in the preparation of this MSDS. Read the entire MSDS for the complete hazard evaluation of this product.

Emergency overview: Moderately toxic by inhalation, in contact to skin and if swallowed. May be irritating to eyes, respiratory system and skin. Diazinon is a cholinesterase inhibitor. Captan and thiophanate-methyl are moderate skin sensitizers.

4. FIRST AID MEASURES

IF POISONING IS SUSPECTED: IMMEDIATELY contact the poison control centre, physician or nearest hospital. Take container, label, product name and pest control product registration number with patient when seeking medical attention.

Inhalation: Move victim to fresh air. Give artificial respiration **ONLY** if breathing has stopped. Give cardiopulmonary resuscitation (CPR) if there is no breathing **AND** no pulse. Obtain medical advice **IMMEDIATELY**.

Skin contact: Flush skin with running water for a minimum of 20 minutes. Start flushing while removing contaminated clothing. If irritation persists, repeat flushing. Obtain medical attention **IMMEDIATELY**.

Eye contact: Immediately flush eyes with running water for a minimum of 20 minutes. Hold eyelids open during flushing. If irritation persists, repeat flushing. Obtain medical attention **IMMEDIATELY**.

Ingestion: If victim is alert and not convulsing, rinse mouth out and give 200-300 mL (1 cup) of water to dilute material. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer more water. Obtain medical attention **IMMEDIATELY**.

Note to physicians: Diazinon is an organophosphate cholinesterase inhibitor. If ingested, induce emesis or lavage stomach. Atropine is an antidote for organophosphate poisoning, and should be given by i.v. in multiple doses until

the patient is atropinized. The patient must remain atropinized for 24 to 48 hours to prevent delayed resorption. 2-PAM may also be given in cases of severe poisoning, provided therapy begins within 24 hours of exposure. Do not give patient morphine, thiophylline, aminophylline, phenothiazines, reserpine, furosemide and ethacrynic acid.

5. FIRE AND EXPLOSION HAZARD DATA

Flash point (°C): Not applicable.

Autoignition temperature (°C): No data.

Flammable limits (lower): Not applicable.

Flammable limits (upper): Not applicable.

Extinguishing media: For large fires, apply aqueous film forming foam or water in the form of a fog. For small fires, use carbon dioxide or dry chemical.

Fire fighting procedures: Wear self-contained breathing apparatus and impervious clothing. Minimize the amount of water used and contain the run-off from entering water supplies or the environment by dyking.

Other fire and explosion hazards: Thermal decomposition may produce oxides of carbon, nitrogen and sulphur, phosgene, hydrogen chloride, organophosphates, hydrogen cyanide, and substituted pyrimidines. Captan thermally decomposed at 155°C and greater.

6. ACCIDENTAL RELEASE MEASURES

Spills, leaks or releases: Wear personal protective equipment. For release to land, stop any further release and spread of contamination, wash hard surfaces with detergent and water, then absorb with suitable absorbent. For release to water, stop any further release and utilize damming and/or water diversion to minimize the spread of contamination. Collect the spilled material, any contaminated soil, water and absorbent, then place in a waste container for proper disposal. Notify applicable government authority if release is reportable or could adversely affect the environment

Deactivating chemicals: None known.

7. HANDLING AND STORAGE INFORMATION

Handling procedures: Use only with adequate ventilation. Avoid breathing dusts, contact with eyes, skin and clothing. Wear appropriate personal protective equipment. Wash thoroughly after use. If clothing becomes contaminated, wash thoroughly before re-use.

Storage requirements: Store in a cool, well-ventilated area. Keep containers closed. Keep out of reach of children and pets.

Storage temperature: Do not expose sealed containers to temperatures above 40°C.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eye protection: Use chemical safety goggles when there is a potential for eye contact.

Skin protection: Chemical-resistant gloves and protective clothing that is impervious under conditions of use.

Respiratory protection: NIOSH/MSHA-approved respirator equipped with pesticide cartridges, if required.

Other protective equipment: None required.

Engineering controls: Provide local exhaust and/or adequate ventilation.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Red powder.

Odour: Typical organophosphorous.

Bulk density: 400 kg/m³.

Boiling point: No data.

Melting point: No data.

Solubility (water): Insoluble.

Solubility (other): No data.

pH: Neutral.

% volatile: Not applicable.

Evaporation rate (ether=1): Not applicable.

Vapour pressure (mm Hg at 20°C): Not applicable.

Vapour density (air=1): Not applicable.

10. STABILITY AND REACTIVITY DATA

Chemical stability: Stable at room temperature.

Hazardous polymerization: Will not occur.

Conditions to avoid: Keep away from elevated temperatures. Moisture and humidity in storage.

Incompatibility with other substances: Strong oxidizing and reducing agents, acids and bases.

Hazardous decomposition products: Thermal decomposition products may produce toxic organophosphates and hydrogen cyanide; also, may include oxides of carbon, nitrogen, sulphur and irritating gases. Moisture in storage may cause diazinon to decompose to tetraethyl monothiopyrophosphate (highly toxic volatile by-product). This product contains stabilizers to prevent diazinon from decomposing in the presence of moisture.

11. TOXICOLOGICAL INFORMATION

Summary: Irritating to the eyes, skin and respiratory system. Diazinon is a cholinesterase inhibitor. May cause skin sensitization. May cause central nervous system (CNS) depression. May cause liver and kidney damage.

Toxicological data

Captan

Oral LD₅₀ (rat) = > 5000 mg/kg

Dermal LD₅₀ (rabbit) = 2000 mg/kg

Inhalation LC₅₀ (rat) = 720 mg/m³/4hr

Thiophanate-methyl

Oral LD₅₀ (rat) = 6640 mg/kg

Dermal LD₅₀ (rabbit) = >10000 mg/kg

Inhalation LC₅₀ (rat) = 1700 mg/m³/4hr

Diazinon

Oral LD₅₀ (rat) = 300 mg/kg

Dermal LD₅₀ (rat) = >2000 mg/kg

Inhalation LC₅₀ (rat) = 2330 mg/m³/4hr

Inhalation: High concentrations of this product may cause irritation to the respiratory tract.

Skin contact: May cause temporary irritation. Can be absorbed through the skin.

Eye contact: This product may cause irritation, redness and possible damage due to abrasion. Technical Captan is a moderate to severe eye irritant.

Ingestion: Ingestion may cause nausea, gastrointestinal upset, abdominal pain and diarrhoea.

Subchronic effects: Symptoms of carbamate poisoning include diarrhoea, vomiting, abdominal pain, profuse sweating, salivation, blurred vision, laboured breathing, tremor, muscular incoordination and headache. Signs and symptoms of kidney damage generally progress from oliguria, to blood in urine, to total renal failure. CNS depression is characterized by headache, dizziness, drowsiness, nausea, vomiting and incoordination. Severe overexposure may lead to coma and possible death due to respiratory failure.

Chronic effects: Human evidence has indicated that this product can cause skin sensitization. Sensitization is the process whereby a biological change occurs in the individual because of previous exposure to a substance and, as a result, the individual reacts more strongly when subsequently exposed to the substance. Once sensitized, an individual can react to extremely low airborne levels, even below the TLV, or to skin contact.

Carcinogenicity: The ingredients in this product are not classified as carcinogenic by the ACGIH, IARC, OSHA and NTP.

Mutagenicity: There is no evidence that this product has mutagenic potential.

Reproductive effects: Studies have shown that captan or diazinon did not affect the reproductive capabilities of rats.

Teratogenicity: There is no evidence that this product has teratogenic potential.

12. ECOLOGICAL INFORMATION

Ecotoxicological information: Highly toxic to aquatic life.

Environmental effects: Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds, or rivers.

Persistence and degradation: Captan has short persistence in soil, crops and water.

13. DISPOSAL CONSIDERATIONS

Dispose of waste material at an approved (hazardous) waste treatment/disposal facility in accordance with applicable local, provincial and federal regulations. Do not dispose of waste with normal garbage or to sewer systems.

14. TRANSPORT INFORMATION

TDG classification: Not regulated.

Special Shipping Instructions: Classified as a "Marine Pollutant" when transported by ship.

Transportation Emergency Telephone Number: 613-787-5620.

15. REGULATORY INFORMATION

WHMIS classification: This product is registered under the *Pest Control Product Act* and is exempt from the requirements of WHMIS.

16. OTHER INFORMATION

The information contained herein is offered only as a guide to the handling of this specific material and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other and additional considerations. No warranty of any kind is given or implied and Norac Concepts Inc. will not be liable for any damages, losses, injuries or consequential damages which may result from the use of or reliance on any information contained herein. This Material Safety Data Sheet is valid for three years.

Prepared by: Norac Concepts Inc.