

ORIGIN

MATERIAL SAFETY DATA SHEET

M-64

PRODUCT CODE 25066

DURSBAN[®] LO

INSECTICIDE

EFFECTIVE DATE: 05 23 89

DATE PRINTED: 08-02-89 MSD-001556

1. INGREDIENTS: (% w/w, unless otherwise noted)

O,O-Diethyl O-(3,5,6-trichloro-2-pyridinyl)
phosphorothioate, (chlorpyrifos)
CAS# 002921-88-2

41.5%

Inert ingredients

58.5%

Xylene range aromatic solvent

CAS# 064742-95-6

Proprietary emulsifiers

This document is prepared pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200). In addition, other substances not 'Hazardous' per this OSHA Standard may be listed. Where proprietary ingredient shows, the identity may be made available as provided in this standard.

2. PHYSICAL DATA:

BOILING POINT: 290°F, 143°C

VAP. PRESS: <10 mmHg @ 25°C

VAP. DENSITY: Not determined

SOL. IN WATER: Emulsifiable

SP. GRAVITY: 1.16

APPEARANCE: Clear liquid

ODOR: Solvent-type odor

3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: 122°F, 50°C

METHOD USED: TCC

FLAMMABLE LIMITS

LFL: 1%

UFL: 6% (xylene range aromatic solvent)

EXTINGUISHING MEDIA: Foam, carbon dioxide, and dry chemical.

FIRE & EXPLOSION HAZARDS: Foam fire extinguishing

system is preferred because uncontrolled water can spread possible contamination. Toxic irritating gases may be formed in the event of a fire. Rapid decomposition above 320-392°F (160-200°C). Violent rupture of containers due to overpressurization may occur at temperatures generated during a fire.

FIRE-FIGHTING EQUIPMENT: Use positive-pressure, self-contained breathing apparatus.

4. REACTIVITY DATA:

STABILITY: (CONDITIONS TO AVOID) Avoid heating above 50°C (122°F). Chlorpyrifos undergoes exothermic decomposition at approximately 130°C (266°F) which can lead to higher temperatures and violent decomposition if generated heat is not removed. Contains petroleum derivative solvent - will burn.

INCOMPATIBILITY: (SPECIFIC MATERIALS TO AVOID)
None known.

HAZARDOUS DECOMPOSITION PRODUCTS: Under fire conditions, hydrogen chloride, ethyl sulfide, diethyl sulfide and nitrogen oxides can be formed.

HAZARDOUS POLYMERIZATION: Will not occur.

5. ENVIRONMENTAL AND DISPOSAL INFORMATION:

ACTION TO TAKE FOR SPILLS/LEAKS: Absorb spills with absorbent material such as HAZORB, ZORBALL, or dirt. Thoroughly wash body areas which come into contact with this product. Contain spills to keep out of sewers. For large spills, consult manufacturer.

DISPOSAL METHOD: Do not contaminate food, feed, or water by storage or disposal. Pesticide wastes are toxic. Improper

disposal of excess pesticide, spray mixture, or rinseate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the hazardous waste representative at the nearest EPA regional office for guidance.

6. HEALTH HAZARD DATA:

EYE: May cause moderate eye irritation. May cause slight corneal injury. Effects may be slow to heal.

SKIN CONTACT: Short single exposure not likely to cause significant skin irritation. Prolonged or repeated exposure may cause skin irritation. A test in guinea pigs indicated that this product may have weak skin sensitization potential. However, experience in the manufacture and use of this product has not provided evidence for skin sensitizing properties. Furthermore, the product did not sensitize human subjects when tested at an end-use dilution.

SKIN ABSORPTION: A single prolonged exposure may result in the material being absorbed in harmful amounts. The LD₅₀ for skin absorption in rabbits is 1265 mg/kg (males) and 930 mg/kg (females).

INGESTION: Single dose oral toxicity is moderate. The oral LD₅₀ for male rats is 226 mg/kg. Amounts ingested incidental to industrial handling are not likely to cause injury; however, ingestion of larger amounts could cause serious injury, even death. If aspirated (liquid enters the lung), may cause lung damage or even death due to chemical pneumonia, a condition caused by petroleum and petroleum-like solvents.

INHALATION: The LC₅₀ for female rats is between 2.6-3.6 mg/l for four hours. Excessive exposure may produce organophosphate type cholinesterase inhibition. Excessive exposure to solvent may cause, in order of increasing concentration, eye and upper respiratory tract irritation, feeling of increased body heat, central nervous system effects such as headache, dizziness, incoordination, drowsiness, unconsciousness.

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SYSTEMIC AND OTHER EFFECTS: Excessive exposure may produce organophosphate type cholinesterase inhibition. Signs and symptoms of excessive exposure to active ingredient may be headache, dizziness, incoordination, muscle twitching, tremors, nausea, abdominal cramps, diarrhea, sweating, pinpoint pupils, blurred vision, salivation, tearing, lightness in chest, excessive urination, convulsions. Active ingredient produced mild adrenal effects when fed to rats, but only at doses that greatly exceeded any exposures that would be received during use of this product. Xylene, a minor component of this mixture, is reported to have caused hearing loss in laboratory animals upon exposure to high concentrations; such effects have not been reported in humans. Xylene has been reported to cause liver, kidney,

and blood effects at high exposure levels. Active ingredient did not cause cancer in long-term animal studies. Xylene was not found to be carcinogenic in a National Toxicology Program bioassay in rats and mice. Active ingredient did not cause birth defects in laboratory animals. Xylene has been reported to cause effects on the fetus when administered to pregnant laboratory animals. In animal studies, active ingredient has been shown not to interfere with reproduction. Results of in-vitro ("test tube") and in-vivo mutagenicity tests on xylene have been negative. Based on a majority of negative data and some equivocal or marginally positive results, active ingredient is considered to have minimal mutagenic potential.

7. FIRST AID:

EYES: Irrigate with flowing water immediately and continuously for 15 minutes. Consult medical personnel.
SKIN: In case of contact, immediately wash skin with plenty of soap and water while removing contaminated clothing and shoes. Call a physician if irritation persists. Wash clothing before reuse. Destroy contaminated leather articles, such as shoes, belts and watch bands.
INGESTION: Do not induce vomiting. Call a physician and/or transport to emergency facility immediately.
INHALATION: Remove to fresh air. If not breathing, give mouth-to-mouth resuscitation. If breathing is difficult, give oxygen. Call a physician.

NOTE TO PHYSICIAN: The decision of whether to induce vomiting or not should be made by an attending physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Suggest serum and/or RBC cholinesterase determination. Atropine by intravenous injection is the preferable antidote. Oximes may or may not be therapeutic but it is recommended they not be used in place of atropine. Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

8. HANDLING PRECAUTIONS:

EXPOSURE GUIDELINE: ACGIH TLV and OSHA PEL are 0.2 mg/m³ for chlorpyrifos, skin. None established for xylene range aromatic solvent: supplier recommends a guideline of 50 ppm for the total product which is a mixture of petroleum hydrocarbons.
VENTILATION: Control airborne concentrations below the exposure guideline. Use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.
RESPIRATORY PROTECTION: Atmospheric levels should be maintained below the exposure guideline. When respiratory protection is required for certain operations, use an

approved air-purifying respirator. For emergency and other conditions where the exposure guideline may be greatly exceeded, use an approved positive-pressure self-contained breathing apparatus, or positive-pressure airline with auxiliary self-contained air supply.

SKIN PROTECTION: Use protective clothing impervious to this material. Selection of specific items such as gloves, boots, apron, or full-body suit will depend on operation. Source of running water for washing contaminated skin should be located in immediate work area.

EYE PROTECTION: Use chemical goggles. If vapor exposure causes eye discomfort, use a full-face respirator.

9. ADDITIONAL INFORMATION:

REGULATORY REQUIREMENTS:

SARA HAZARD CATEGORY: This product has been reviewed according to the EPA 'Hazard Categories' promulgated under Sections 311 and 312 of the Superfund Amendment and Reauthorization Act of 1986 (SARA Title III) and is considered, under applicable definitions, to meet the following categories:

- An immediate health hazard
- A delayed health hazard
- A fire hazard

SPECIAL PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: See label. Keep out of reach of children. Do not swallow. Do not get in eyes or on skin. Avoid breathing mist or vapors. Keep away from heat and open flames. Handle concentrate in ventilated area. Wash thoroughly after handling. Depending on degree of exposure of personnel, consider monitoring blood cholinesterase levels. If in doubt, seek advice from The Dow Chemical Company. Keep away from food, feedstuffs and domestic water supplies.

For health and safety information on end-use dilutions of up to 1% DURSBAN® insecticides, see the Health and Safety Fact Sheet, Form #135-1270-88, available from The Dow Chemical Company.

MSDS STATUS: Revised Sections 6, 7, and 8.

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