

DURSBAN* TC TERMITICIDE CONCENTRATE
 DOWELANCO
 INDIANAPOLIS, IN 46268-1189
 EMERGENCY PHONE:517-636-4400
 General Phone: 1-800-352-6776
 EPA Reg. Number: 62719-47
 Effective Date: August 12, 1994
 Product Code: 26056
 MSDS Number: 001449

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

O,O-Diethyl O-(3,5,6-trichloro-2-pyridinyl) phosphorothioate, (chlorpyrifos)	
CAS# 002921-88-2	42.8%
Inert ingredients:	57.2%
Proprietary emulsifiers	
Xylene range aromatic solvent	
CAS# 064742-95-2	
Cumene^1 CAS# 000098-82-8	
Xylene^1 CAS# 001330-20-7	
Ethyltoluene^1 CAS# 025550-14-5	
1,2,4-Trimethylbenzene^1	
CAS# 000095-63-6	

 ^1Components of xylene range aromatic solvent

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: 290F, 143C
 VAP. PRESS: <10 mmHg @ 25C
 VAP. DENSITY: Not determined
 SOL. IN WATER: Emulsifiable
 SP. GRAVITY: Approx. 1.12 @ 20C/20C
 APPEARANCE: Yellow liquid.
 ODOR: Solvent-type odor.

 3. FIRE AND EXPLOSION HAZARD DATA:

FLASH POINT: 122F, 50C
 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 under fire conditions. Rapid decomposition above 320-392F (160-200C). Violent rupture of containers due to over-pressurization may occur at temperatures generated during a fire.
 FIRE-FIGHTING EQUIPMENT: Use positive-pressure, self-contained breathing apparatus and full protective equipment.

 4. REACTIVITY DATA:

STABILITY: (CONDITIONS TO AVOID) Avoid heating above 50C (122F). Chlorpyrifos undergoes exothermic decomposition at approximately 130C (266F) 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 an absorbent material such as HAZORB, ZORBALL, or dirt. Thoroughly wash body areas which come into contact with this product. Contain spill 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 rinsate 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. Vapors may irritate eyes.

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. Small amounts swallowed incidental to normal handling operations are not likely to cause injury; however, swallowing amounts larger than that may cause serious injury, even death. If aspirated (liquid enters the lung), may cause lung damage or even death due to chemical pneumonia.

INHALATION: The LC50 for female rats is between 2.6-3.6 mg/l for 4 hours. Excessive exposure may produce organophosphate type cholinesterase inhibition. Excessive exposure to solvent may cause respiratory tract irritation and central nervous system depression. Signs and symptoms of central nervous system depression, in order of increasing exposure, are headache, dizziness, drowsiness, and incoordination.

SYSTEMIC (OTHER TARGET ORGAN) 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, tightness 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. Solvent has been reported to cause liver, kidney, and blood effects at high exposure levels. Xylene, a minor component of this mixture, is reported to have caused hearing loss in laboratory animals upon inhalation of high concentrations; such effects have not been reported in humans.

CANCER INFORMATION: 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.

TERATOLOGY (BIRTH DEFECTS): Active ingredient did not cause birth defects in laboratory animals. Solvent was toxic to the fetus in laboratory animal tests, but only at doses that were toxic to the mothers. Very high concentrations of solvent (producing severe toxicity to adult animals) induced an increase in cleft palate in mice, which is a common developmental abnormality in mice and is associated with stress to the maternal animals. No malformations were induced at exposures less than those causing severe toxicity to the adult animals.

REPRODUCTIVE EFFECTS: Chlorpyrifos did not interfere with fertility in reproduction studies in laboratory animals. Some evidence of toxicity to the offspring occurred, but only at a dose high enough to produce significant toxicity to the parent animals. In a 3-generation reproduction study on the solvent, the only effects observed were at exposures that produced severe toxicity to the parent animals.

MUTAGENICITY (EFFECTS ON GENETIC MATERIAL): Results of in vitro ('test tube') and animal mutagenicity tests on the aromatic solvent 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: Flush eyes with plenty of water for 15 minutes. Get medical attention.

SKIN: Immediately wash skin with plenty of soap and water. Get medical attention. Before washing, remove contaminated clothing and shoes. Wash clothing before reuse. Destroy contaminated shoes.

INGESTION: Call a physician or poison control center immediately. Do not induce vomiting. Contains an aromatic petroleum solvent. Do not give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air if symptoms of cholinesterase inhibition appear and get medical attention immediately.

NOTE TO PHYSICIAN: The decision of whether to induce vomiting or not should be made by an attending physician. If lavage is performed, endotracheal and/or esophageal control is suggested. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach.

Chlorpyrifos is a cholinesterase inhibitor. Treat symptomatically. If exposed, plasma and red blood cell cholinesterase tests may indicate significance of exposure (baseline data are useful). Atropine, only by injection, is the preferable antidote. Oximes, such as 2-PAM/protopam, may be therapeutic if used early; however, use only in conjunction with atropine. In case of severe acute poisoning, use antidote immediately after establishing an open airway and respiration.

Supportive care. Treatment based on judgment of the physician in response to reactions of the patient.

8. HANDLING PRECAUTIONS:

EXPOSURE GUIDELINE:

Chlorpyrifos: ACGIH TLV and OSHA PEL are 0.2 mg/m³, Skin.

Trimethylbenzene (mesitylene): ACGIH TLV and OSHA PEL are 25 ppm

Aromatic 100 (xylene range aromatic solvent): none established. Supplier recommends a guideline of 50 ppm for the total product which is a mixture of petroleum hydrocarbons.

Cumene¹: ACGIH TLV and OSHA PEL are 50 ppm, Skin.

Xylene¹: ACGIH TLV and OSHA PEL are 100 ppm TWA, 150 ppm STEL.

Ethyltoluene¹: Dow Industrial Hygiene Guide is 10 ppm.

VENTILATION: Provide general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

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.

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. Remove contaminated clothing immediately, wash skin area with soap and water, and launder clothing before reuse.
 EYE PROTECTION: Use chemical goggles. If vapor exposure causes eye discomfort, use a full-face respirator.

 9. ADDITIONAL INFORMATION:

SPECIAL PRECAUTIONS TO BE TAKING 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 flame. 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 DowElanco. Keep away from food, feedstuffs and domestic water supplies. For health and safety information on end-use dilutions of up to 1% DURSBAN (R) insecticides, see the Health and Safety Fact Sheet, Form No. 311-17-001 (2/93), available from DowElanco.

MSDS STATUS: Revised section 7.

REGULATORY INFORMATION:

(Not meant to be all-inclusive---selected regulations represented).

NOTICE: The information herein is presented in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ from one location to another; it is the buyer's responsibility to ensure that its activities comply with federal, state or provincial, and local laws. The following specific information is made for the purpose of complying with numerous federal, state or provincial, and local laws and regulations. See MSD Sheet for health and safety information.

SARA 313 INFORMATION: This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372:

CHEMICAL NAME	CAS NUMBER	CONCENTRATION
1,2,4-TRIMETHYLBENZENE	000095-63-6	5 - 15%
CUMENE	000098-82-8	1 - 5%
XYLENE (MIXED ISOMERS)	001330-20-7	1 - 5%

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

TOXIC SUBSTANCES CONTROL ACT (TSCA): All ingredients are on the TSCA inventory or are not required to be listed on the TSCA inventory.

OSHA HAZARD COMMUNICATION STANDARD: This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA) RATINGS:

Category	Rating
Health	2
Flammability	2
Reactivity	1

 The Information Herein Is Given In Good Faith, But No Warranty, Express Or

Implied, Is Made. Consult The DowElanco Company For Further Information.
*Trademark of DowElanco