

MATERIAL SAFETY DATA SHEET

PRODUCT : Chlorpyrifos 50% EC

PRODUCT DESIGNATION : Insecticide

Section 1. Product & Company Identification

Common Name : Chlorpyrifos
Grade : Formulation
Active Ingredient : Chlorpyrifos
Chemical Name of Active Ingredient (IUPAC) : Chlorpyrifos: O,O-diethyl O-(3,5,6-trichloro-2-pyridinyl) phosphorothioate
Chemical Family of A. I. : Pyrethroid
Molecular Formula of A. I. : Chlorpyrifos: C₉H₁₁Cl₃NO₃PS
Molecular Mass of A. I. : Chlorpyrifos: 350.6
Manufacturer & Supplier : **M/s United Chemicals**
Head Office: B-371, 1st Floor, Meera Bagh, New Delhi, India
Factory: 15/1, 15/2, 15/3, industrial Area, Vidisha, M.P.
Telephone Number : +91-11-25258770

Section 2. Composition / Information on Ingredients

| Identity | | % W/W content |
|--------------------|------------|----------------|
| Chlorpyrifos, a.i. | 2921-88-2 | 50.00 |
| Other ingredients | 00000-00-0 | 50.00 |
| Total | | 100.00% |

Section 3. Hazards Identification

Emergency Overview

Appearance and odour: Pale yellow to off - white crystal, mild mercaptan type odour

Warning Statements: Keep out of reach of children

Potential Health Effects Likely Routs of Exposure: Skin contact, Inhalation and Ingestion.

Eye Contact: May cause slight irritation and redness to eye

Skin contact: Not irritating to skin but irritation may occur on prolonged contact

Ingestion: If swallowed, this substance is considered to be toxic and likely to cause damages to internal organs.

Section 4. First Aid Measures

FIRST AID

Ingestion: If swallowed do NOT induce vomiting. Wash mouth with water. If poisoning occurs, contact a Doctor or Poisons Information Centre. If swallowed, activated charcoal may be advised. Give atropine if instructed.

Eye contact: Immediately hold eyes open and flood gently with clean water. Ensure irrigation under eyelids by occasionally lifting them. Do not try to remove contact lenses unless trained. If irritation persists, seek medical advice.

Remove contaminated clothing. Wash skin with soap and water to remove chemical. If skin is irritated, seek medical advice.

Section 5. Fire Fighting Measures

Extinguishing media: Combustible liquid (C1). Flash point > 62°C. Extinguish fire using carbon dioxide, foam or dry agent. If not available, use water fog or fine water spray but ensure all runoff is contained. Contain all runoff.

Precautions for fire- fighters and special protective equipment: isolate fire area. Evacuate downwind residents. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke or vapors generated.

Hazards from combustion Products: There is a risk of an explosion from this product if commercial quantities are involved in a fire. On heating will emit toxic fumes. Firefighters to wear self-contained breathing apparatus and suitable protective clothing if risk to of exposure to vapour or smoke.

Section 6. Accidental Release Measures

Personal Protection: Wear appropriate safety clothing and eye/face protection.

Steps to be taken in case of a spill: Do not wash into sewers or into any body of water. Advise water authority if spillage has entered water course or drainage system. Soak up with

sand or other non-combustible absorbent material and place into containers for disposal. For large spills, barricade area and consult manufacturer. Thoroughly scrub the floor or other impervious surfaces with a strong industrial detergent and rinse with water.

Section 7. Handling & Storage

Precautions for Safe Handling: No smoking, eating or drinking should be allowed where material is used or stored. Keep out of reach of children. Do not store for prolonged periods in direct sunlight. When opening the container, preparing the spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and face shield or goggles.

Conditions for Safe Storage: Not classified as a Dangerous Good. This product is a Schedule 6 Poison (S6) and must be stored, transported and sold in accordance with the relevant Health Department regulations. This product is classified as a C1 (Combustible Liquid) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to state regulations for storage and transport requirements.

Store in the closed, original container in a well ventilated area away from children, animals, food, feedstuffs, seed and fertilizers. Do not store for prolonged periods in direct sunlight

Section 8. Exposure Control, Personal Protection

Personal Protection : When airborne exposure guidelines and/or comfort levels maybe exceeded, use an approved air-purifying respirator. For emergency conditions, use an approved positive-pressure self contained breathing apparatus.

Hand and body protection : For brief contact, no precautions other than clean body-covering clothing and chemical resistant gloves should be needed. When prolonged or frequently repeated contact could occur, use protective clothing impervious to this material.

For emergency conditions : Use protective clothing impervious to this material. Selection of specific items will depend on operation.

Eye Protection : Use chemical goggles. If vapour exposure causes eye discomfort, use a full-face supplied-air respirator.

Section 9. Physical and Chemical Properties

| | |
|--------------------|--|
| Appearance / state | : Liquid. |
| Colour | : Tan – yellow colored |
| Odour | : Mercaptan odour (characteristic type odour). |
| pH | : 4.5 to 6.5 |
| Corrosivity | : Not corrosive. |
| Density | : 1.08-1.12 @20°C |
| Flash Point | : > 62°C |

Section 10. Stability & Reactivity

Chemical Stability: Product is considered stable in ambient conditions for a period of at least 2 years after manufacture.

Conditions to avoid: Do not store for prolonged periods in direct sunlight. Store away from sources of ignition.

Incompatible Materials: Strong oxidising agents.

Hazardous decomposition

Products: When involved in a fire will emit toxic and noxious fumes.

Hazardous reactions: No particular reactions to avoid.

Section 11. Toxicological Information

Route(s) of Entry

| | |
|---------------------------|--|
| Ingestion, | |
| Oral LD50 | : Rat (male/ female) 96-480mg/kg |
| Skin Contact, Dermal LD50 | : Rat (male / female) >2000mg/kg |
| Inhalation, LC50 | : Rat (male / female) > 0.2 mg/L (4 hours) |
| Eye | : Moderate irritant. |

Section 12. Ecological Information

| | |
|---|--|
| Acute Oral Toxicity in Birds | : In Mallard ducks 112 mg/kg of body weight |
| Acute Toxicity in Fish (96 hrs LC ₅₀) | : Rainbow trout: 0.009mg/L |
| Acute Toxicity Honey bees | : Oral LD50 24Hrs. 0.035µg/bee topical LD ₅₀ hrs0.02µg/bee |

Section 13. Disposal Consideration

Spills and Disposal: Persons involved in cleanup require adequate skin protection - see section 8. In case of spillage, contain and absorb spilled material with absorbent material such as clay, sand or cat litter and dispose of waste as indicated below or in accordance to the Australian Standard 2507- Storage and Handling of Pesticides. Keep out animals and unprotected persons. Keep material out of streams and sewers. Vacuum, shovel or pump waste into an approved drum. To decontaminate spill area, tools and equipment, wash with detergent and water and add the solution to the drums of wastes already collected and label contents. Dispose of drummed wastes, including decontamination solution in accordance with the requirements of Local or State Waste Management Authorities.

Disposal of empty Containers: Triple or preferably pressure rinse containers before disposal. Add rinsing's to spray tank. Do not dispose of undiluted chemicals on-site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and bury empty containers in a local authority landfill. Empty containers and product should not be burnt.

Section 14. Transport Information

IMDG Classification

Shipping name : Organophosphorous pesticide, Liquid, Toxic, Flammable
Class : 6.1
Packing group : III
UN number : 3017
Marine pollutant : Yes

Section 15. Regulatory Information

EU- Classification

Hazard Symbol : Xn Harmful
Risk Phrases : R10, R22, R38, R41 and R43
Safety Phrases : S2, S13, S20/21, S26, S28, S36/37/39, S46 and S62

Section 16. Other Information

All information and instructions provided in this Material Safety Data Sheet (MSDS) are based on the current state of scientific and technical knowledge at the date indicated on the present MSDS and are presented in good faith and believed to be correct. This information applies to the PRODUCT AS SUCH. In case of new formulations or mixes, it is necessary to ascertain that a new danger will not appear. It is the responsibility of persons in receipt of this MSDS to ensure that the information contained herein is properly read and understood by all people who may use, handle, dispose or in any way come in contact with the product. If the recipient subsequently produces formulations(s) containing this product, it is the recipient's sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.

Safety Division: UNITED CHEMICALS, SAFETY DIVISION



UNITED