

Sharda Cropchem Limited.

Domnic Holm, 29th Road , Bandra (W), Mumbai 400050 , India

Tel : + 91 22 6678 2800, Fax : + 91 22 6678 2828/ 6678 2808

EMAIL : shardain@vsnl.com Website: <http://www.shardaintl.com>

(AN ISO 9001 COMPANY)

MATERIAL SAFETY DATA SHEET CHLORPYRIFOS 48% EC

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING.

Product name: Chlorpyrifos 480 g/l EC

Supplier Name and address : Sharda Cropchem Ltd.

Domnic Holm, 29th Road,
Bandra (W), Mumbai – 400 050
India.

Emergency Telephone : 0091 22 66782800

2. COMPOSITION/INFORMATION ON INGREDIENTS.

Chemical characterisation : 480 g/l chlorpyrifos

497 g/l solvent naphtha light

Hazardous component : O,O-diethyl O-3,5,6-tichloro-2-pyridyl phosphorothioate
(IUPAC) or chlorpyrifos (E-ISO)

CAS Registry No. : 2921-88-2 (chlorpyrifos)
64742-95-6 (solvent)

EC Number: 220-864-4 (chlorpyrifos)
265-199-0 (solvent)

3. HAZARDS IDENTIFICATION.

Skin : Moderately irritating.

Eyes : Non irritant but direct contact may cause pain, hyperaemia, lacrimation, twitching of the eyelids.

Inhalation : In general first effects of cholinesterase inhibitors inhaled are usually respiratory and may include nasal hyperaemia, watery discharge, cough, chest discomfort, wheezing, bronchial secretions and bronchoconstriction. If sufficient amounts are absorbed other systemic symptoms may begin immediately or up to 12 hours such as pallor, nausea, vomiting, diarrhoea, abdominal cramps, headache, dizziness ocular pain, blurred vision, lacrimation, salivation, sweating, confusion. Other neuroeffects may include ataxia, slurred speech, areflexia, fatigue, weakness, tremors, twitching and eventually paralysis of the extremities and possibly of the respiratory muscles.

Ingestion : Nausea, vomiting, anorexia, abdominal cramps and diarrhoea. Symptoms of cholinesterase inhibition can occur as described in inhalation.

Other information -

Physical/chemical effects : Flammable product.

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Environmental effects : Toxic to aquatic organisms and bees.

4. FIRST AID MEASURES.

Skin contact : Remove all contaminated clothes and shoes. Wash off immediately with soap and plenty of water (15 - 20 minutes). Get medical attention immediately.

Eyes contact : Rinse immediately with plenty of water and seek medical advice.

Inhalation : Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention immediately.

Ingestion : Remove by gastric lavage and catharsis. Maintain blood pressure and airway. Give oxygen if respiration is depressed. Do not perform gastric lavage if victim is unconscious. Get medical attention immediately.

Other information Atropine is an antidote. In case of severe poisoning give pralidoxime. Antidotes should be administered by qualified medical personnel.

5. FIRE-FIGHTING MEASURES.

Extinguishing media : Dry chemical, carbon dioxide, halon, water spray or standard foam.

Unsuitable extinguishing : High pressure water jet media

Special exposure hazards : Do not release chemically contaminated water into drains, soil and surface waters.

Special protective : As for all fires involving chemicals : chemical protection suit, suitable gloves equipment for fire-fighters and boots, and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES.

Personal precautions : Use personal protective equipment.

Methods for cleaning up : Do not touch spilled material. Stop leak if you can do it without risk. For small spills, take up with sand or other absorbent material and place into containers for later disposal. Move containers from spill area. For larger spills, dike far ahead of spill for later disposal. Keep unnecessary people away. Isolate hazard area and deny entry. Ventilate closed space.

Environmental precautions : Prevent contamination of water.

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7. HANDLING AND STORAGE.

Handling precautions : Keep product in original tightly closed container ; avoid exposure by inhalation ; do not get on skin, eyes or clothing ; do not eat, drink or smoke when handling; wash hands before eating, drinking or smoking.

Storage : Store in locked, well-ventilated storeroom, away from children and unauthorized personnel, and food and animal feed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION.

Ventilation : Provide local exhaust or general dilution ventilation.

Exposure control limits : For chlorpyrifos : 0.2 mg/m³ OSHA TWA (skin) ; 0.2 mg/m³ ACGIH TWA (skin).

Respiratory protection : Wear a suitable mask (gas/vapour filter).

Hand protection : Wear chemical resistant gloves.

Eye protection : Wear splash-proof resistant safety goggles.

Skin and body protection : Wear overalls and closed footwear.

9. PHYSICAL AND CHEMICAL PROPERTIES.

Form : Liquid.

Colour : Yellowish/light brown.

Odour : Aromatic.

pH as supplied : 4.5 (1% solution in water).

Boiling point / range : 145 -160°C.

Melting point / range : Not applicable.

Flash point : 45°C (closed cup).

Flammability : Flammable.

Oxidising properties : None.

Vapour pressure : 20 - 30 Pa (solvent, 20°C).

Density : 1.07

Water solubility : Emulsifies in water.

Partition coefficient : Log Pow = 5.0 (chlorpyrifos)

10. STABILITY AND REACTIVITY.

Stability : Stable under normal temperatures and pressures.

Conditions to avoid : No special precautions other than good housekeeping of chemicals.

Material to avoid : Hydrolysed by strong acids and alkalis.

Hazardous decomposition : Thermal decomposition products may include toxic oxides of phosphorus and sulphur.

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11. TOXICOLOGICAL INFORMATION.

Acute LD50 oral rats : 292 mg/kg.
Acute LD50 dermal rats : 2383 mg/kg.
Acute LC50 inhalation rats (4 h) : 2.41 mg/l air.
Eye irritation : Moderate irritant.
Skin irritation : Mild irritant.
Carcinogen status : Not carcinogenic.
Mutagenicity : Not mutagenic.
Reproductive toxicity : Not teratogenic
ADI (man) mg/kg : 0.01 mg/kg bw

12. ECOLOGICAL INFORMATION.

LC50 (96 h) rainbow trout : 35.5 \square g/l.
Acute LD50 oral hen ; 25.5 mg/kg.
Bee toxicity : Toxic to bees, LD50 0.5 \square g/bee (oral), 0.12 \square g/bee (contact).
Aquatic invertebrates : *Daphnia magna* EC50 (48h) 0.34 \square g/l.

13. DISPOSAL CONSIDERATIONS.

Pesticide disposal : Burn in high temperature incinerator with effluent scrubbing. Always dispose of in accordance with local regulations.
Container disposal : Contaminated packaging material should be treated as the product.

14. TRANSPORT INFORMATION.

UN No. : 3017
Class : 6.1
Packing group : III
Proper shipping name : Organophosphorus pesticide liquid, toxic, flammable
(chlorpyrifos
48%/naphtha solvent solution)
Environmental risk : Marine pollutant

15. REGULATORY INFORMATION.

Hazard symbol : The harmful symbol (Xn).
The dangerous for the environment symbol (N).
Risk phrases : R10 - Flammable.
R20/22 - Harmful by inhalation and if swallowed.

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R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

R57 - Toxic to bees.

Safety phrases : S1/2 - Keep locked up and out of the reach of children.

S13 - Keep away from food, drink and animal feeding stuffs.

S20/21 - When using do not eat, drink or smoke.

S24/25 - avoid contact with skin and eyes.

S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

S45 – In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

S51 - Use only in well-ventilated areas.

S56 - Dispose of this material and its container to hazardous or special waste collection point.

16. OTHER INFORMATION.

The information contained in this safety data sheet is given in good faith. It is accurate to the best of our knowledge and belief and represents the most up to date information. The information given in this data sheet does not constitute or replace the user's own assessment of work place risk as required by other health and safety legislation.