



CURE CHEM INDIA

The Chemical People

A-85, 1ST FLOOR, MASOODPUR MAIN ROAD, VASANT KUNJ, NEW DELHI-110070 (INDIA)
TEL: (91-11) 26898689, 26139884, MOBILE: 9811213932, FAX: (91-11) 26123165
EMAIL: kutty@curechem.com WEB: <http://www.curechem.com>

MATERIAL SAFETY DATA SHEET DIAZINON 300 EC

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: DIAZINON 300 EC

Chemical name: *O*, *O*-Diethyl *O*-[4-methyl-6-(propan-2-yl) pyrimidin-2-yl] phosphorothioate

Product Use: Insecticide

Manufacturer: CURE CHEM INDIA

Address: A-85, 1ST FLOOR, MASOODPUR MAIN ROAD, VASANT KUNJ, NEW DELHI-110070 (INDIA)

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2. COMPOSITION / INFORMATION ON INGREDIENTS

Formulation type: emulsifiable concentrate

INGREDIENTS	CAS No.	Content (%w/v)
Diazinon	[333-41-5]	30
Inert + solvent	-	70

3. HAZARDS IDENTIFICATION

These are typical **POISONING SYMPTOMS** organophosphate pesticides – nausea, diarrhoea, dripping nose and mouth, excessive salivation, stomach cramps, excessive sweating, trembling, loss of muscle coordination, muscle twitches, weakness, mental confusion, blurred vision, breathing difficulties, rapid pulse pin-point pupils. (Cholinesterase inhibition)

EYE: Mild irritant

SKIN: The active ingredient, Diazinon, can be rapidly absorbed through the skin thus causing cholinesterase inhibition and is a Mild irritant.

INGESTION: Moderate Toxicity

INHALATION: Slight Toxicity

SYSTEMIC (other target organ): Repeated minor exposure of Diazinon tech may cause a cumulative poisoning effect due to cholinesterase inhibition.



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Cholinesterase levels will return to normal a few weeks after exposure is stopped. The hydrocarbon liquid may cause narcosis and central nervous system depression following prolonged over-exposure.

CANCER INFORMATION: Diazinon is not considered carcinogenic

TERATOLOGY (Birth defects): No evidence of in laboratory mammals.

REPRODUCTIVE EFFECTS: No evidence of in laboratory mammals.

MUTAGENICITY: The mutagenicity in humans remains unevaluated.

4. FIRST AID MEASURES

If poisoning occurs by any exposure route contact a doctor and follow the advice given. Show this Material Safety Data Sheet as well as the product Label to a doctor.

EYE: Rinse immediately with plenty of water for at least 15 minutes, holding eye open and taking care to rinse under eyelids as well. If irritation persists seek medical attention.

SKIN: Wash off skin immediately with soap and plenty of water. Remove all contaminated clothing and shoes. If poisoning occurs seek immediate medical attention and if more than 15 minutes from medical attention, give one Atropine tablet (0.5mg) every 5 minutes until dryness of mouth occurs.

INGESTION: Wash out mouth with water. Do not induce vomiting. Keep patient at rest and seek medical advice.

INHALATION: Move affected person to fresh air and keep until recovered. If poisoning occurs seek immediate medical attention and if more than 15 minutes from emergency medical attention, give one Atropine tablet (0.5mg) every 5 minutes until dryness of mouth occurs.

NOTE TO PHYSICIAN: Treat as cholinesterase inhibitors. Atropine sulphate is antidote. **Always seek medical attention when atropine has been given. (Even if symptoms have subsided)**

5. FIRE FIGHTING MEASURES

Extinguishing media: For small fire: dry chemical, carbon dioxide. For large fire: water spray, alcohol resistant foam.

Special procedures: Fight fires from a protected location. Do not allow fire-water to enter drains. During a fire this product may release smoke and hazardous decomposition products such as emits toxic fumes: carbon dioxide, carbon monoxide, nitrogen oxides, phosphorus oxides, sulfur oxide. Keep container cool by spraying with water.

Special exposure hazards: When heated to decomposition,



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Protection against fire: Wear proper protective equipment. Use self-contained breathing apparatus when in close proximity to fire.

6. ACCIDENTAL RELEASE MEASURES

SPILLS AND DISPOSAL

In case of spillage it is important to take all steps necessary to:

- Avoid eye and skin contact.
- Avoid contamination of waterways

Procedure for spill:

- (1) Keep all bystanders away.
- (2) Wear full length clothing and PVC gloves.
- (3) Reposition any leaking containers so as to minimise further leakage.
- (4) Dam and absorb spill with an absorbent material (e.g. sand or soil).
- (5) Shovel the absorbed spill into drums and top with hydrated lime.
- (6) Disposal of the absorbed material will depend on the extent of the spill:
 - For quantities up to 50L of product bury in a secure landfill site.
 - For quantities greater than 50L seek advice (use emergency contact number below) from the manufacturer before attempting disposal. Contain in a secure location until disposal method is established.
- (7) Decontaminate spill area with hydrated lime scattered over the spill prior to rinsing off with water.

Dispose of empty, used containers by:

- (a) Triple rinsing with water. Add the rinsings to the tank mix or dispose of rinsate in a disposal pit away from desirable plants and their roots, and watercourses. On-site disposal of undiluted product is unacceptable.
- (b) Breaking, crushing or puncturing the container to prevent reuse.
- (c) Disposing of in a local authority landfill site that does not burn its refuse. If there is no local authority landfill readily available in your area, bury the containers under at least 50 cm of soil at a licensed/approved disposal site.

DO NOT dispose empty containers or those with traces of product through open fire burning.

7. HANDLING AND STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE: Store in original container in secured dry storage area. Prevent cross-contamination with other pesticides or fertilizers.

Keep container dry. Keep away from strong bases, sources of ignition and heat - No smoking. Keep product out of direct sunlight below 55°C. Keep out of reach of children, unauthorised persons and animals. Avoid contact with eyes and skin. Do not ingest this product. When handling this product: do not apply to humans, their clothing, or bedding.



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8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Exposure values at the TWA (Time Weighted Average) means the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. There is a blanket recommendation of 10mg/m³ for inspirable dusts or mists when limits have not otherwise been established. ACGIH TLV: 0.1mg/Cu metre STEL 0.3mg/Cu metre

ENGINEERING CONTROLS: In industrial situations, concentration values below the TWA value should be maintained. Values may be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe air borne concentrations of mists, dusts or vapours are high; you are advised to modify the process or environment to reduce the problem.

RECOMMENDATIONS FOR MANUFACTURING, COMMERCIAL BLENDING, AND PACKAGING WORKERS: Avoid skin and eye contact and inhalation of vapour. Wear overalls, chemical goggles and impervious gloves. Use adequate ventilation. Eye washing and shower facilities available.

EYE / FACE PROTECTION: Eye protection should be worn when splashing is possible. Wear splash proof goggles or a full-face shield.

SKIN PROTECTION: Wear chemical resistant PVC or nitrile gloves. **For help in selecting suitable gloves consult chemical handling safety experts.** Wear cotton overalls buttoned to the neck and wrist. Wear a washable hat. **For help in selecting suitable clothing consult chemical handling safety experts.** **For help in selecting boots consult chemical handling safety experts.**

RESPIRATORY PROTECTION: Do not breathe vapour/spray/fumes. Use an organic-chemical cartridge respirator when working in poorly ventilated areas or where there is potential for spray mist, splashing or vapours.

APPLICATIONS AND ALL OTHER HANDLERS: After handling this product always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Yellow to brown liquid

Boiling point: >112^oC

Flash Point: >61^oC (closed cup)

Odour: Strong and objectionable

pH value: 5-8



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Flammability: Non-flammable

Specific gravity (H₂O=1): 0.94 (at 20°C)

Combustibility: Class 3.3 - combustible

Behaviour in water: Emulsifiable

Corrosiveness: Non-corrosive

Other solubility: Diazinon is very soluble in petroleum ether; alcohol and benzene.

10. STABILITY AND REACTIVITY

HAZARDOUS DECOMPOSITION PRODUCTS: Diazinon decomposes above 120°C and is susceptible to oxidation. The presence of traces of water promotes hydrolysis on storage to highly toxic tetraethyl monothiopyrophosphate. It is stable in alkaline media, but is slowly hydrolysed by water and by dilute acids.

INCOMPATIBILITY: Avoid oxidising agents, strong acids and alkalis.

HAZARDOUS POLYMERIZATION: This product is unlikely to spontaneously polymerise.

11. TOXICOLOGICAL INFORMATION

ACUTE

Toxicity - This product is slightly hazardous (WHO Hazard Class III)

MODERATE TOXICITY

Tests on rats using the active ingredient, **diazinon technical**, indicate moderate following single doses of the undiluted product. (LD50 = approx. 1500 mg/kg for product)

SLIGHT TOXICITY

Tests on rats using **diazinon technical** indicate a slight toxicity due to skin contact with undiluted product. (LD50 for rats >2150 mg/kg for active ingredient)

SLIGHT TOXICITY

Tests on rats using **diazinon technical** indicate a slight toxicity due to inhalation of undiluted product. (LC50 (4 h) >2330 mg/m³ for active ingredient)

Irritation -

Eye: **SLIGHTLY IRRITATING**

Skin: **NONE IRRITATING** (based on studies with rabbits)

Respiratory System: **SLIGHTLY IRRITATING** (based on human experience)

Sensitisation -

Skin: **Diazinon technical** did not induce a sensitisation reaction in guinea pigs. The sensitising potential of the **hydrocarbon solvent** is not known.

CHRONIC

Diazinon technical has been extensively tested on laboratory mammals and in test-tube systems. No evidence of mutagenic, carcinogenic, teratogenic or reproductive effects was obtained. Repeated minor exposure may cause a cumulative poisoning effect due to



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cholinesterase inhibition. Cholinesterase levels will return to normal within a few weeks after exposure is stopped.

The **hydrocarbon liquid** may cause narcosis and central nervous system depression following prolonged over-exposure.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGY: Diazinon technical is moderately toxic to fish LC50 (96h) Rainbow Trout = 2.6 – 3.2 mg/L and highly toxic to birds and bees. **Diazinon technical** is highly toxic to birds [LD50 = 2.7-5.2 mg/kg], and moderately toxic to bees.

Diazinon Technical has no known mutagenic or teratogenic potential.

Diazinon is **highly toxic** to birds, fish and other wildlife. Birds, especially waterfowl (ducks or geese), feeding or drinking on treated areas may be killed.

Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Keep out of lakes, streams, ponds, ponds, tidal marshes and estuaries. Runoff may be hazardous to aquatic organisms in neighbouring areas. Shrimp and crab may be killed at application rates recommended on the product label. Do not apply where fish, shrimp, crab, and other aquatic life are important resources.

Diazinon is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area. Do not contaminate water by cleaning equipment or disposal of wash waters.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of empty, used containers by;

- (a) Triple rinsing with water. Add the rinsings to the tank mix or dispose of rinsate in a disposal pit away from desirable plants and roots, and watercourses. On-site disposal of undiluted product is unacceptable.
- (b) Breaking, crushing or puncturing the containers to prevent reuse.
- (c) Disposing of in a local authority, bury landfill site that does not burn its refuse. If there is no local authority landfill readily available in your area, bury the containers under at least 50cm of soil at a licensed/approved disposal site. **DO NOT** burn empty containers or product.

14. TRANSPORTATION INFORMATION

ROAD AND RAIL TRANSPORT: SHIPPING NAME: organophosphorous pesticide, liquid, toxic.

DANGEROUS GOODS: 6.1

Sub-risk: Not Applicable

P.G: III

HAZCHEM: 2X UN No: 3018



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MARINE TRANSPORT: SHIPPING NAME: organophosphorous pesticide, liquid, toxic.

DANGEROUS GOODS: 6.1

Sub-risk: Not Applicable

P.G: III

HAZCHEM: 2X UN No: 3018

AIR TRANSPORT: SHIPPING NAME: organophosphorous pesticide, liquid, toxic.

DANGEROUS GOODS: 6.1

Sub-risk: Not Applicable

P.G: III

HAZCHEM: 2X

UN No: 3018

15. REGULATORY INFORMATION

WHO HAZARD CLASS: II POISON SCHEDULE: 6

FLAMMABILITY: Non-flammable. Is a Combustible C1

RISK PHRASES: Toxic in contact with skin. Toxic if swallowed

SAFETY PHRASES: After contact with skin wash immediately with soap and water.
Wear suitable protective clothing and gloves.

If you feel unwell, contact doctor or Poisons Information immediately (show label if possible)

16. OTHER INFORMATION

Packing and Labelling:

Packed in 100ml, 200ml, and 1liter fluorinated-high density polyethylene plastic containers and labelled according to the **Zimbabwe-Statutory Instrument 144 of 2012, Pesticides Regulations, 2012 (CAP. 18: 12) and Pesticides (Amendment) Regulations 2013 (No.1)**

Disclaimer:

The information on this sheet is not a specification; it does not guarantee specific properties. The information is intended to provide general guidance as to health and safety based upon our knowledge of the handling, storage use of the product. It is not applicable to unusual or nonstandard uses of the product or where instructions or recommendations are not followed. All information is given in good faith but without guarantee in respect of accuracy, and no responsibility is accepted for errors and omissions or the consequence thereof. We recommend that matters which are to do with application rates and pests' controlled careful and thorough reading of the product label must be done.