



ZHEJIANG RAYFULL CHEMICALS CO., LTD.

No.113,Puxing Road, Puzhou Industrial Park,Longwan District,
Wenzhou, Zhejiang, China.

Tel: +86-577-88905587,88908853 Fax:+86-577-88905567

Website: <http://www.rayfull.com>

MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

ZHEJIANG RAYFULL CHEMICALS CO.,LTD

ADD: NO.113 PUXING ROAD, PUZHOU INDUSTRIAL PARK, LONGWAN DISTRICT,
WENZHOU ZHEJIANG P.R. CHINA

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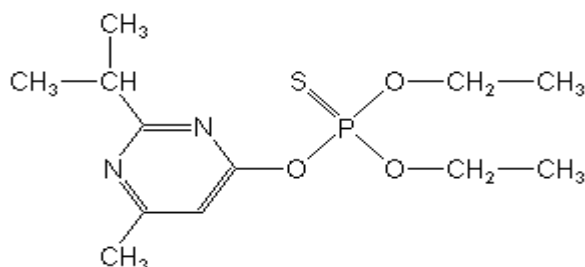
sales@rayfull.com

1. Chemical Product Identification

Product Name: Diazinon 95%TC

Molecular Formula: $C_{12}H_{21}N_2O_3PS$

Structural Formula:



Molecular Weight: 304.35

Chemical Name: O,O-diethyl O-2-isopropyl-6-methyl(pyrimidine-4-yl) phosphorothioate

Color: Light yellow-brown

Form: liquid

Odor: organophosphate odor

CAS No.: 333-41-5

2. Composition / Information On Ingredients

Composition	CAS No.	Content %
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Diazinon	333-41-5	95.00
Other ingredients		5.00

3. Hazards Identification

Component	Symbol	R phrases
Diazinon	T	R20/21/22/36

More important danger for the man: inhibition of acetylcholinesterase and problem accumulation

Dangers for the environment: maybe bio-concentrate in fish

Physical-chemical dangers: product oxide of phosphorus, sulfur and nitrogen

4. First Aid Measures

If poisoning occurs, immediately contact a doctor or Poisons Information Centre, and follow the advice given. Show this Material Safety Data Sheet 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.



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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: Dry chemical, foam, carbon dioxide.

Don't use: not applicable

Particular risk: not applicable

Measures of personal protection: safety glasses or goggles, rubber gloves, shoes plus socks, long-sleeved shirt, and long pants.

6. Accidental Release Measures

Personal cautions: safety glasses or goggles, rubber gloves, shoes plus socks, long-sleeved shirt, and long pants.

Cleaning methods

EX: clear the material in time. Transfer to a properly labeled deposit that will be closed and sealed until the recovery of elimination of the product.

Environmental cautions

EX: prevent the contamination of the floor and of beds of water.

7. Handling And Storage

Handling: do not apply to humans, their clothing, or bedding. Do not contaminate food or use on household tanks.

Storage: store in original container only in cool, dry, well-ventilated, secure area out of reach of children and animals.

Technical protective measures:



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Fire and explosion protection: the area must be far from fire and flammable materials.

8. Exposure Controls / Personal Protection

TWA: 0.1 mg/m³ (8 hrs)

Personal protective equipment

Respiratory protection: approved respirator

Protective gloves: rubber gloves

Eye protection: goggles

Industrial hygiene: use good industrial hygiene. Wear face shield or goggles, elbow length PVC gloves, cotton overalls buttoned to the neck and wrist, washable hat and half face respirator with dust and vapor cartridge. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

9. Physical And Chemical Properties

Boiling point: 83-84°C

Density: 1.18 g/cm³

Vapour pressure: 0.0187 Pa at 20°C

Refractive index: 1.4978-1.4981 at 20°C

Flash point: 104.4°C

Solubility: 40 mg/L at room temperature in the water

10. Stability And Reactivity

Conditions to avoid: fire, heat and high temperature

Products to avoid: acid and alkaline pesticides

Thermal decomposition: >120°C



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Hazardous decomposition products: oxides of nitrogen, hydrogen, carbon, sulfur, and phosphorous.

11. Toxicological Information

Acute oral LD₅₀ for rat: 285mg/kg

Acute dermal LD₅₀ for rat: 455 mg/kg

Inhalation LD50 (4h) for rat: 200mg/m³

Slightly sensitizing to rabbit skin.

Slightly sensitizing to rabbit eye.

Chronic toxicity: Chronic effects have been observed at doses ranging from 10 mg/kg/day for swine to 1000 mg/kg/day for rats. Inhibition of red blood cell cholinesterase, and enzyme response occurred at lower doses in the rats. Enzyme inhibition has been documented in red blood cells, in blood plasma, and in brain cells at varying doses and with different species.

Reproductive effects: No data are currently available.

Teratogenic effects: The data on teratogenic effects due to chronic exposure are inconclusive. One study has shown that injection of diazinon into chicken eggs resulted in skeletal and spinal deformities in the chicks. Bobwhite quail born from eggs treated in a similar manner showed skeletal deformities but no spinal abnormalities. Acetylcholine was significantly affected in this latter study. Tests with hamsters and rabbits at low doses (0.125 0.25 mg/kg/day) showed no developmental effects, while tests with dogs and pigs at higher levels (1.0 10.0 mg/kg/day) revealed gross abnormalities.

Mutagenic effects: While some tests have suggested that diazinon is mutagenic, current evidence is inconclusive.



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Carcinogenic effects: Diazinon is not considered carcinogenic. Tests on rats over a 2-year period at moderate doses (about 45 mg/kg) did not cause tumor development in the test animals.

Organ toxicity: Diazinon itself is not a potent cholinesterase inhibitor. However, in animals, it is converted to diazoxon, a compound that is a strong enzyme inhibitor.

12. Ecological And Ecotoxicological Information

Effects on birds: Birds are quite susceptible to diazinon poisoning. Bird kills associated with diazinon use have been reported in every area of the country and at all times of the year. Geese and mallard ducks may be exposed to LC50 concentrations in very short periods of time after application (from 15 to 80 minutes depending on the application rate of the pesticide). Birds are significantly more susceptible to diazinon than other wildlife. LD50 values for birds range from 2.75 mg/kg to 40.8 mg/kg.

Effects on aquatic organisms: Diazinon is highly toxic to fish. In rainbow trout, the diazinon LC50 is 2.6 to 3.2 mg/L. In hard water, lake trout and cutthroat trout are somewhat more resistant. Warm water fish such as fathead minnows and goldfish are even more resistant with diazinon LC50 values ranging up to 15 mg/L. There is some evidence that saltwater fish are more susceptible than freshwater fish. Bioconcentration ratios range from 200 in minnows to 17.5 for guppies. These studies show that diazinon does not bioconcentrate significantly in fish.

Effects on other organisms: Diazinon is highly toxic to bees.

13. Disposal Considerations

Product: dispose of in compliance with all state and local laws and regulations.

14. Transport Information

Not applicable



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15. Regulatory Information

Not applicable

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 on 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 produce formulations containing this product, it is the recipients sole responsibility to ensure the transfer of all relevant information from this MSDS to their own MSDS.