



Hangzhou Tianlong Biotechnology Co., Ltd.

Add: Room 1906, Fengqi Times Tower, No.338, Fengqi East Road, Hangzhou, Zhejiang, China.

MATERIAL SAFETY DATA SHEET

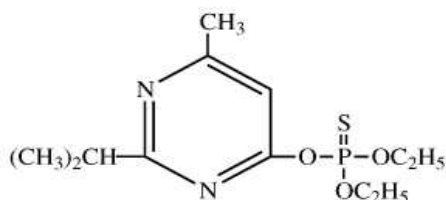
1. Chemical Product and company Identification

Product Name: Diazinon

Molecular Formula: C₁₂H₂₁N₂O₃PS

Molecular Weight: 304.35

Structural Formula:



Chemical Name: 0,0-diethyl-O-(2-isopropyl-6-methyl-4-pyrimidinyl)-phosphorothioate

CAS No.: 333-41-5

Supplier: HANZHOU TIANLONG BIOTECHNOLOGY CO., LTD

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2. Composition / Information On Ingredients

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

3. Hazards Identification

More important danger for the man: inhibition of acetyl cholinesterase 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

Skin: wash with soap and water.

Eyes: flush with plenty of water for at least 15 minutes. See medical attention if irritation develops or persists.

Inhalation: move to fresh air. Do not breathe spray mist.

Ingestion: if oral contamination, drink 1-2 glasses of water and milk. Call physician/poison control center immediately.

5. Fire-Fighting Measures

Extinguishing media

To be used: 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 or 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:

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

Appearance: Yellow liquid

Boilting point: 83°C@0.0002mmHg

Density: 1.18 g/cm³

Water solubility: negligible

Other solubility: petroleum ether v.s.; alcohol v.s.; benzene v.s.

Ph value: 5-8

Flash point: 180 F @ 20 °C

Ignition temperature: not applicable

10. Stability And Reactivity

Conditions to avoid: fire, heat and high temperature

Products to avoid: acid and alkaline pesticides

Thermal decomposition: 120C

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

Hazardous reaction: none

11. Toxicological Information

Contact with the skin: weakness, headaches, salivation, sweating, and nausea.

Contact with the eyes: eyes become red, blurred vision, non-reactive pinpoint pupils and pain.

Inhalation: weakness, headaches, and tightness in the chest, abdominal cramps and salivation.

Ingestion: salivation, sweating, nausea, vomiting, diarrhea, abdominal cramps, and slurred speech.

Sharp toxicity: not applicable

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.

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.

Sensitisation: not applicable

12. Ecological 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

Class: 6.1

UN No.: 3018

Packing group: III

15. Regulatory Information

Safe phrase: Keep locked up and out of reach children.

Keep away from food, drink and animal feeding stuffs.

Do not breathe vapour/spray.

Avoid contact with skin and eyes.

Wear suitable protective clothing, gloves and eye/face protection.

Avoid release to the environment.

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.