



MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

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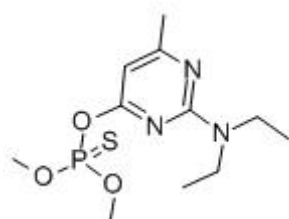
1. Chemical Product Identification

Product Name: Pirimiphos-methyl 90% TC

Molecular Formula: C₁₁H₂₀N₃O₃PS

Molecular Weight: 305.33 g/mol

Structural Formula:



Chemical Name:

O-[2-(diethylamino)-6-methyl-4-pyrimidinyl] *O*, *O*-dimethyl phosphorothioate

Form: Liquid

Color: Brown homogenous

Odor: Odorless

CAS No.: 29232-93-7

2. Composition / Information On Ingredients

Composition	CAS No.	Content %
Pirimiphos-methyl	29232-93-7	90.0
Other ingredients		10.0



3. Hazards Identification

This product contains an anticholinesterase compound. Do not use if under medical advice not to work with such compounds.

Flammable.

Harmful if swallowed.

Irritating to eyes and respiratory system.

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

Harmful: may cause lung damage if swallowed.

Vapors may cause drowsiness and dizziness.

4. First Aid Measures

General advice: Have the product container, label or Material Safety Data

Sheet with you when calling the Syngenta emergency number, a poison control center or physician, or going for treatment.

Inhalation: Remove to fresh air. Keep patient warm and at rest. If breathing is irregular or stopped, administer artificial respiration. Call a physician or Poison Control Centre immediately.

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Skin contact: Take off contaminated clothing and shoes immediately. Wash off immediately with soap and plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.

Eye contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses. Immediate medical attention is required.

Ingestion: If swallowed, seek medical advice immediately and show this container or label. Do NOT induce vomiting.

Symptoms: The symptoms are of cholinesterase inhibition

Medical advice: Call Syngenta at the emergency number shown in this document, a poison control center or doctor immediately for treatment advice. Consider taking venous blood for determination of blood cholinesterase activity (use heparin tube) Administer atropine sulfate, either by intramuscular or intravenously, dependant on severity of poisoning .Specific



antidotes are oximes (e.g. Pralidoxime) or Toxogonin.

5. Fire-Fighting Measures

Suitable extinguishing media

Small fires: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Large fires: alcohol-resistant foam

Extinguishing media which must not be used for safety reasons: Do not use a solid water stream as it may scatter and spread fire.

Specific hazards during fire fighting:

As the product contains combustible organic components, fire will produce dense black smoke containing hazardous products of combustion. Exposure to decomposition products may be a hazard to health. Flash back possible over considerable distance.

Special protective equipment for firefighters: In the event of fire, wear self-contained breathing apparatus.

Further information: Do not allow run-off from fire fighting to enter drains or water courses.

Cool closed containers exposed to fire with water spray.

6. Accidental Release Measures

Personal precautions: Refer to protective measures listed in sections 7 and 8. Keep people away from and upwind of spill/leak. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Remove all sources of ignition. Pay attention to flashback.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. Do not flush into surface water or sanitary sewer system.

Methods for cleaning up: Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations.

Additional advice: If the product contaminates rivers and lakes or drains inform respective authorities.

7. Handling And Storage

Advice on safe handling: Avoid contact with skin and eyes. When using, do not eat, drink or smoke. Take precautionary measures against static discharges. Use only in an area containing



flame proof equipment.

Requirements for storage areas and containers:

Keep containers tightly closed in a dry, cool and well-ventilated place;

Keep out of the reach of children;

Keep away from food, drink and animal feeding stuffs;

Keep away from heat and sources of ignition;

Keep away from combustible material;

Keep in an area equipped with sprinklers;

No smoking.

Other data: Physically and chemically stable for at least 2 years when stored in the original unopened sales container at ambient temperatures.

8. Exposure Controls/Personal Protection

Engineering measures: Containment and/or segregation is the most reliable technical protection measure if exposure cannot be eliminated. The extent of these protection measures depends on the actual risks in use. If airborne mists or vapors are generated, use local exhaust ventilation controls. Assess exposure and use any additional measures to keep airborne levels below any relevant exposure limit. Where necessary, seek additional occupational hygiene advice.

Personal protective equipment

Protective measures: The use of technical measures should always have priority over the use of personal protective equipment. When selecting personal protective equipment, seek appropriate professional advice. Personal protective equipment should be certified to appropriate standards.

Respiratory protection: A combination gas, vapor and particulate respirator may be necessary until effective technical measures are installed. Protection provided by air-purifying respirators is limited. Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

Hand protection: Chemical resistant gloves are not usually required. Select gloves based on the physical job requirements.

Eye protection: If eye contact is possible, use tight-fitting chemical safety goggles.



Skin and body protection: Assess the exposure and select chemical resistant clothing based on the potential for contact and the permeation/ penetration characteristics of the clothing material. Wash with soap and water after removing protective clothing. Decontaminate clothing before re-use, or use disposable equipment (suits, aprons, sleeves, boots, etc). Wear as appropriate: dust impervious protective suit.

9. Physical and Chemical Properties

Appearance: Brown homogenous liquid

Water: 0.2% max

Acidity: 0.3% max

Melting point: 21°C

Boiling point: Decomposes before boiling

Octanol-water partition coefficient at pH 7, 20°C: Log P: 3.9

Solubility in water: 11 mg/L

10. Stability and Reactivity

Hazardous decomposition products: Combustion or thermal decomposition will evolve toxic and irritant vapors.

Hazardous reactions: Hazardous polymerization does not occur. Stable under normal conditions.

11. Toxicological Information

Acute oral LD₅₀ for rats is 1414 mg/kg

Acute dermal LD₅₀ for rats is >2000 mg/kg.

Acute inhalation toxicity LC₅₀ (4h) for rats is >4.7 mg/L.

Skin irritation: Slightly irritating to skin (rabbits).

Eye irritation: Slightly irritating to eyes (rabbits).

Skin sensitization for guinea pig: Weak response

12. Ecological And Ecotoxicological Information

Effect on birds: Acute oral LD₅₀ for Mallard is >1695 mg/kg.

Effect on fish: Acute LC₅₀ (96 h) for Rainbow trout is 0.404 mg/l.

Effects on aquatic invertebrates: Acute EC₅₀ (48 h) for Daphnia magna is 0.00021 mg/l.



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Effects on algae: Acute 72 hour EC₅₀ for *Pseudokirchneriella subcapitata* is 1.0 mg/l.

Effects on bees: Oral acute 48 hour LD₅₀ is >0.22 µg/bee.

13. Disposal Considerations

Product: Product/Waste disposal: Must be disposed of in accordance with local regulations.

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Contaminated packaging: Empty remaining contents. Triple rinse containers. Empty containers should be taken for local recycling or waste disposal. Do not re-use empty containers.

14. Transport Information

Not applicable

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.