



MATERIAL SAFETY DATA SHEET

Manufacturer/information service:

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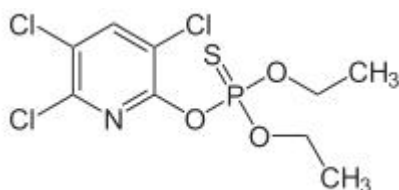
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1. Chemical Product Identification

Product Name: Chlorpyrifos 97% TC

Molecular Formula: C₉H₁₁Cl₃NO₃PS

Structural Formula:



Molecular Weight: 350.6 g/mol

Chemical Name: *O,O*-diethyl *O*-3,5,6-trichloro-2-pyridyl phosphorothioate (IUPAC)

Color: White to yellowish

Form: Crystal solid

Odor: unpleasant

CAS No.: 2921-88-2

2. Composition / Information On Ingredients

Composition	CAS No.	Content %
Chlorpyrifos	2921-88-2	97.00
Other ingredients		3.00

3. Hazards Identification



Emergency Overview:

Cholinesterase inhibitor; Maybe fatal if swallowed

Harmful if absorbed through skin or inhaled

Causes moderate eye irritation

Avoid breathing product vapors or dust

Avoid contact with eyes, skin or clothing

Keep out of reach of children

Symptoms of over exposure are headaches, nausea, vomiting, cramps, weakness, blurred vision, tightness in chest, labored breathing, nervousness.

Potential Health Effects

Eye: Maybe injure eye tissue if not removed promptly

Skin: Harmful if absorbed through the skin. Large exposures could be fatal.

Ingestion: Maybe fatal if swallowed.

4. First Aid Measures

If swallowed: Call a physician or Poison Control Center immediately. Contain petroleum distillates. Do not induce vomiting. Get medical attention immediately.

If inhaled: Remove person to fresh air. Apply artificial respiration if symptoms indicate.

If on skin: Wash affected areas with soap and water.

If in eyes: Flush eyes with plenty of water. Get prompt medical attention.

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 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.

8. Exposure Controls / Personal Protection

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

Color: White to yellowish

Physical state: powder

Melting point: 42-43.5°C

Vapor pressure: 2.7 mPa at 25 °C

Density: 1.398 g/cm³

Solubility: 1.4mg/L at 25 °C in the water

10. Stability And Reactivity

Conditions to avoid: fire, heat and high temperature

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

Hazardous reaction: none



11. Toxicological Information

Acute oral LD₅₀ for rat: 66 mg/kg.

Acute dermal LD₅₀ for rat: >1250 mg/kg.

Inhalation LC₅₀ (4 h) for rat: 0.1 mg/L.

Skin irritation: Slightly-irritating to skin (rabbits).

Eye irritation: Moderately-irritating to eyes (rabbits).

Skin Sensitization: Not a skin sensitiser (guinea pigs).

12. Ecological And Ecotoxicological Information

Effect on birds: high toxicity to birds, acute oral LD₅₀ for *Colinus virginianus* is 39.2 mg/kg.

Effect on fish: high toxicity to fish, acute 96 hour LC₅₀ for Rainbow trout is 0.025 mg/L.

Effect on aquatic invertebrates: high toxicity to aquatic invertebrates, acute 48 hour EC₅₀ for *Daphnia magna* is 0.00010 mg/L.

Effect on algae: moderate toxicity to algae, acute 72 hour EC₅₀ is 0.48 mg/L.

Effect on honeybees: high toxicity to honeybees, contact acute 48 hour LD₅₀ is 0.059 µg/bee;

Oral acute 48 hour LD₅₀ is 0.25 µg/bee.

Effect on earthworms: moderate toxicity to earthworms, acute 14 day LC₅₀ for *Eisenia foetida* is 129 mg/kg.

13. Disposal Considerations

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

14. Transport Information

EC Risk Classification: T - Toxic: R25

Xn - Harmful: R21, R43

N - Dangerous for the environment: R50, R53

EC Safety Classification: S1/2, S45, S60, S61

WHO Classification: II (Moderately hazardous)

UN Number: 2783

Hazard Class: 6.1

Packaging Group: III



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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.