



MATERIAL SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION OF THE SUBSTANCE AND COMPANY

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Product Name: PYRODAN 50% EC (CHLORPYRIFOS METHYL)

Formulation Type : Emulsifiable Concentrate

CAS RN: 5598-13-0

Chemical Name: O,O-dimethyl O-3,5,6-trichloro-2-pyridyl phosphorothioate

Chemical family: Organophosphate

SECTION 2 - COMPOSITION/ INFORMATION ON INGREDIENTS

Component	Percentage	CAS RN
chlorpyrifos methyl	50%	5598-13-0
Inert Ingredient	50%	-----

SECTION 3 - IDENTIFICATION OF HAZARDS

Emergency Overview:

Danger! Poison. Hazard to humans and domestic animals.

Keep out of the reach of children. Poisonous if swallowed, inhaled or absorbed through the skin.

Rapidly absorbed through skin. Do not breathe fumes or dust.

Harmful if swallowed. Toxic in contact with skin. May cause sensitization by skin contact.

Potential health effects :

Eye: May be absorbed through the eye and produce symptoms similar to those from ingestion.

Causes redness, irritation, tearing.

Skin: Harmful if absorbed through skin. May produce symptoms similar to those from ingestion.

May cause irritation, redness, swelling.

Inhalation: Highly toxic if inhaled. May produce symptoms similar to those from ingestion.

May cause dizziness, headache, nausea, vomiting, death.

Ingestion: May be fatal if swallowed. May lead to rapid onset of nausea, vomiting, diarrhea, abdominal pain, involuntary shaking, excess salivation, pinpoint pupils, blurred vision, profuse sweating, temporary paralysis, respiratory depression, and convulsions.



SECTION 4- FIRST AID MEASURES

IF INHALED: Remove to fresh air and keep at rest. If signs of poisoning occur, obtain urgent medical advice, as above. If breathing stops or shows signs of failing, start artificial respiration. Do not use the direct mouth-to-mouth method. Administer oxygen if necessary. Get to a doctor or hospital quickly. If advised by doctor or Poisons Information Center.

IF ON SKIN: If poisoned by skin absorption, remove any contaminated clothing and shoes immediately. Wash skin thoroughly with soap and water for 15-20 minutes. Seek immediate medical assistance - get to doctor or hospital quickly. Persons assisting the patient should protect themselves from contamination. If advised by doctor or Poisons Information Center

IF SWALLOWED: Wash out mouth with water. Keep patient at rest and seek urgent medical advice as above. Transport patient to doctor or hospital quickly. If advised by doctor or Poisons Information Center

DO NOT attempt to give anything by mouth to a semi-conscious or unconscious person.

IF IN EYES: Flush eyes with plenty of water for 15 minutes.

SECTION 5 - FIRE FIGHTING MEASURES

FLASHPOINT: >54.2 ° C

Extinguishing media

Recommended: Water, foam, dry chemical, carbon dioxide (CO₂)

Unusual fire and explosion hazards

Minimize use of water to prevent environmental contamination.

Environmental precautions .

Hazardous products of combustion

Carbon monoxide (CO), nitrogen oxides (NO_x), hydrogen chloride (HCl) .

Fire fighting equipment

Self-contained breathing apparatus.

Equipment should be thoroughly decontaminated after use.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Spillage or Leak Disposal Procedures:

Shut off or remove any sources of ignition. DO NOT smoke. Avoid contact with the spilled material or contaminated surfaces. When dealing with spills wear personal protective (clothing and equipment). Keep people and animals away and upwind. Prevent spilled material from entering drains or watercourses. Contain spill - remove liquid mechanically (explosion proof or hand pump) or absorb with earth, sand, clay, or other absorbent material.



Collect and store in properly labelled, loosely covered drums for safe disposal. Deal with all spillages immediately. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority.

Waste Disposal Methods:

When returnable container is empty or contents no longer required return it to the point of purchase. For non-returnable containers, triple or (preferably) pressures rinse them before disposal. Add rinsing to spray tank. Do not dispose of undiluted chemicals onsite. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt. Dispose of waste product via a licensed disposal contractor to an approved landfill.

SECTION 7 - HANDLING AND STORAGE

Handling

Avoid contact with eyes, skin and clothing.

Avoid breathing vapour or mist.

Wash hands thoroughly after handling or contact.

When using do not eat, drink or smoke.

Thoroughly clean equipment after use.

Do not contaminate drains, sewers and water ways when disposing of equipment rinse water.

Emptied containers retain vapour and product residue.

FOLLOW LABELLED WARNINGS EVEN AFTER CONTAINER IS EMPTIED.

Storage

Keep out of reach of children.

Keep away from food, drink and animal feed.

Keep only in the original container.

Keep container tightly closed in a cool, well-ventilated place

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

ENGINEERING CONTROLS: Control process conditions to avoid contact. Use only in well ventilated areas.



PERSONAL PROTECTIVE EQUIPMENT:

EYE PROTECTION: Wear Safety Goggles

CLOTHING: Wear cotton overalls buttoned to the neck and wrist and a washable hat.

GLOVES: Wear elbow length PVC gloves.

RESPIRATOR: If inhalation is likely, wear a respirator with an organic vapour cartridge.

Other: After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water. After each day's use, wash gloves, goggles or face shield, respirator face piece and contaminated clothing.

USER SAFETY RECOMMENDATIONS:

1. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

2. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

3. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION:	Clear amber liquid
ODOR:	aromatic odor
VISCOSITY :	11.456 cp
SURFACE TENSION :	33.55 dyne/cm
REFRACTIVE INDEX :	1.52386
FLASH POINT :	54.2 ° C
ACIDITY :	2 ± 0.08% as H ₂ SO ₄
DENSITY :	1.13958 gm/cm ³

SECTION 10 - STABILITY AND REACTIVITY

CHEMICAL STABILITY: Normally stable. However, product will decompose if heated above 300 F for an extended period, which significantly increases the risk of explosion.

CONDITIONS TO AVOID: Avoid temperatures above 60°C

INCOMPATIBILITY WITH OTHER MATERIALS: Strong alkalis, amines and oxidizers. **HAZARDOUS DECOMPOSITION PRODUCTS:** Hydrogen chloride, Ethyl sulfide, Diethyl sulfide, Nitrogen oxides. Especially during combustion.

HAZARDOUS POLYMERIZATION: Will not occur.



SECTION 11 - TOXICOLOGICAL INFORMATION

I- Acute Toxicity:

1- Acute Oral	Male Rat LD ₅₀ : 1770.94 mg/kg Female Rat LD ₅₀ : 1088.64 mg/kg
2- Acute Dermal	Male Rat LD ₅₀ : 2999.99 mg/kg Female Rat LD ₅₀ : 3674.22 mg/kg
3- Inhalation	LC ₅₀ for Rat : >0.67 mg/l 4 h LD ₅₀ for Rat
4- Skin Irritation	Rat: Non-irritating.
5- Eye Irritation	Rat: Non-irritating.
Teratology:	High dose of chlorpyrifos methyl fed to pregnant mice resulted in an increase in cleft palate No abnormalities have been observed in other species under similar test conditions
Reproduction Studies:	chlorpyrifos methyl Did not interfere with reproduction
Mutagenicity Studies:	In vitro and animal genetic toxicity studies were negative for the components tested

SECTION 12 - ECOLOGICAL INFORMATION

Toxicity to fresh water fish:	(LC ₅₀) 10.96 mg / l of water
Toxicity of avian:	(LC ₅₀) >5000 ppm
Toxicity of honey bee:	(LD ₅₀) 1.122 µg/bee

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE:

Pesticide wastes are toxic and hazardous. Dispose of in accordance with applicable and local laws and regulations. Do not discharge or pour into soil, drainage system or bodies of water.

CONTAINER:

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning (plastic containers). If burned, stay out of smoke.



SECTION 14 - TRANSPORT INFORMATION

The data provided in this section is for information only. Please apply the appropriate regulations to properly

DOT SHIPPING DESCRIPTION: Organophosphorus Pesticides, Liquid, Toxic
(Chlorpyrifos-methyl)

DOT HAZARD CLASS: 6.1

UN NUMBER: UN 3018

DOT PACKING GROUP: PG III

DOT PRIMARY/SUBSIDIARY LABEL: Keep Away From Food

DOT PRIMARY/SUBSIDIARY PLACARD Keep Away From Food

SECTION 15- REGULATORY INFORMATION

EC classification :

Risk Symbols

N - Dangerous for the environment

Risk Phases (R)

R43 May cause sensitization by skin contact.

R50 Very toxic to aquatic organisms.

R53 May cause long-term adverse effects in the aquatic environment.

SECTION 16 - OTHER INFORMATION

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