

פרמתרול 25 - 25

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1. IDENTIFICATION OF SUBSTANCE AND COMPANY

Common name: Permethrol 25

Use: Insecticide

Formulation Type: WP

Manufacturer: Tapazol Chemical works ltd.

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2. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS no.	Quantity (%)
Permethrin tech	52645-53-1	25

3. HAZARDS IDENTIFICATION

Emergency overview: Thermal decomposition and burning may form toxic by-products. Highly toxic to fish and aquatic organisms. Keep out of drains and watercourses.

Potential health effects: Effects from overexposure result from inhalation or coming into contact with the skin. Contact with this product rarely produces skin sensations such as numbing, burning and tingling. These skin sensations are reversible and usually subside within 12 hours.

Medical conditions aggravated by exposure: Skin affections.



4. FIRST AID MEASURES

Eyes: Flush with water for at least 15 minutes. If irritation occurs and persists, obtain medical attention.

Skin: Wash with plenty of soap and water.

Ingestion: : Drink one or two glasses of water and induce vomiting by touching the back of the throat with a finger or by giving syrup of ipecac. Never induce vomiting or give anything by mouth to an unconscious person. Contact a medical doctor.

Inhalation: Remove to fresh air. If breathing difficulty or discomfort occurs and persists, obtain medical attention.

Note to physician: Permethrin has low oral, dermal and inhalation toxicity, and is minimally irritating to the eyes and practically non-irritating, to the skin. Reversible skin sensation (paresthesia) may occur and ordinary skin salves has been found useful in reducing discomfort. Treatment is otherwise controlled removal of exposure followed by symptomatic-and supportive care.

5. FIRE-FIGHTING MEASURES

Flash point: Not applicable.

Extinguishing media: Foam or water.

Explosion hazard: Not explosive.

Protective equipment: Wear full protective clothing and self-contained breathing apparatus.

Hazardous decomposition products: Carbon monoxide and carbon dioxide. Minor quantities of chlorine and hydrogen chloride may be formed.

More information: Isolate fire area. Evacuate downwind. Do not breathe smoke gases generated.



6. ACCIDENTAL RELEASE MEASURES

Personal protection: Wear protective clothing and personal protective equipment as prescribed in Section 8."Exposure Controls Personal Protection".

Environmental Protection: Isolate and post spill area. Keep unprotected persons and animals out of the area. Keep material out of streams and sewers. Vacuum or shovel into a drum and label content prior to disposal.

Procedure: To clean and neutralize spill area, tools and equipment, wash with a suitable solution (i.e., bleach or caustic soda ash and either ethylene glycol or an appropriate alcohol, i.e., methanol, ethanol or isopropanol). Follow this by washing with a strong soap and water solution.

7. HANDLING AND STORAGE

Store in a cool, dry, well-ventilated place. Do not use or store near heat, open flame and hot surfaces. Store in original containers only. Keep out of reach of children and animals. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

8. EXPOSURE CONTROL/PERSONAL PROTECTION

Engineering controls: Ventilate all transport vehicles prior to unloading.

Eye/ Face protection: For splash, spray or mist exposure, wear chemical protective goggles or face shield.

Respiratory protection: For splash, spray or mist exposure wear, as a minimum, a properly fitted half-face air purifying respirator which is approved



for pesticides (U>S> NIOSH, MSHA, EU Cen or comparable certification organization). Respirator use and selection must be based on airborne concentrations.

Hand protection: Wear chemical protective gloves made of materials such as neoprene. Thoroughly wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.

Work Clothing: Depending upon concentrations encountered, wear coveralls or long-sleeved uniform and head covering. For larger exposures as in the case of spills, wear full body cover barrier suit, such as a rubber rain suit. Leather items - such as shoes, belts and watchbands - that become contaminated should be removed and destroyed. Launder all work clothing before reuse (separately from household laundry).

Personal hygiene: Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking or smoking. Shower at the end of the workday.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White powder.

Boiling point: Not applicable.

Flash point: Not applicable.

Water solubility: forms a dispersion

Vapour density: Not applicable

Vapour pressure: Negligible

pH: Not applicable.

10. STABILITY AND REACTIVITY

Conditions to avoid: Excessive heat and fire

Hazardous decomposition products: Carbon monoxide and carbon dioxide.

Minor quantities of chlorine and hydrogen chloride may be formed.

Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

Oral: LD₅₀ = 24000 mg/kg (rat).

Dermal: LD₅₀ > 8000 mg/kg (rabbit).

Inhalation: LC₅₀ = 9.2 mg/l, 4 hr (rat).

Effects from Overexposure: Permethrin has low oral, dermal and inhalation toxicity, and is minimally irritating to eyes and practically non-irritating to the skin. Experience to date indicates that contact with Permethrin has rarely produced skin sensations such as numbing, burning or tingling. These sensations are reversible and usually subside within 12 hours. Large, toxic doses administered to laboratory animals have produced symptoms such as diarrhea, salivation, tremors and intermittent convulsions. Overexposure of animals to Permethrin via inhalation has also produces hyperactivity and hypersensitivity.

Chronic effects from overexposure: In studies with laboratory animals, Permethrin did not cause reproductive toxicity or teratogenicity. analysis of chronic feeding studies in both 4/5 mice and rats with Permethrin resulted in the conclusion that Permethrin's potential for induction of oncogenicity in experimental animals is low and that



the likelihood of oncogenic effects in humans is non-existent or extremely low. Long term feeding studies in animals resulted in increased liver and kidney weights, induction of the liver microsomal drug metabolizing enzyme system and histopathological in the lungs and liver. An overall absence of genotoxicity has been demonstrated in mutagenicity testing with Permethrin.

12. ECOLOGICAL INFORMATION

Physical environmental properties: The formulation is stable at a wide range of pH values. Permethrin itself has a moderate rate of degradation in soil and the half-life is related to the soil type, microbial population, and concentration in the soil and the aerobic condition of the soil. Because of its high affinity for organic matter ($K_{oc}=86,000$), there is little potential for movement in soil or entry into ground water. Permethrin has a Log Pow of 6.1, but because of the ease with which biological systems degrade the molecule, the potential for bioconcentration and accumulation in the environment is low ($BCF=500$).

Environmental toxicology: Toxic to bees. Permethrin formulation is highly toxic to fish ($LC_{50}+0.5\mu\text{g/L}$ to $7.6\mu\text{g/L}$). Marine species are often more sensitive than freshwater species. Bacteria, algae, molluscs and amphibians are much more tolerant of Permethrin than fish and arthropods.

Care should be taken to avoid contamination of the aquatic environment.

Permethrin is slightly toxic to birds and oral LD_{50} values are greater than 3600 mg/kg. Longer dietary studies showed that up to 500 ppm diet had no effect on bird reproduction.



13. DISPOSAL CONSIDERATIONS

Open dumping or burning of this pesticide or its packaging is prohibited.
Dispose of according to label instructions and environment ministry regulations Container which held these pesticides should be cleaned, prior to disposal, by triple-rinsing.

14. TRANSPORT INFORMATION

UN no.: 3077

Class: 9

Packaging group: III

RT MDR: ADR (Road):

Proper Shipping name: Environmentally hazardous substance solid,
(Permethrin 25%)

O.A.C.I. (Air):

Proper Shipping name: Transport Environmentally hazardous substance
solid, (Permethrin 25%)

Passenger: yes

Cargo: yes

I.M.D.G. (Maritime):

Proper Shipping name: Transport Severe marine pollutant (Permethrin 25%)

15. REGULATORY INFORMATION

Xn: Harmful.

N: Very toxic to aquatic organisms.

R phrases:

R20: Harmful by inhalation.

R21: Harmful in contact with skin.

R22: Harmful if swallowed.

R50: Very toxic to aquatic organisms.

S phrases:

S 52: Keep out of reach of children.

S13: Keep away from food, drink and animal feeding stuffs.

S 20, 21: When using, do not eat, drink or smoke.

S49: Keep only in the original container.

S 61: Avoid release into the environment.

16. OTHER INFORMATION

Disclaimer: The information provided by TAPAZOL CHEMICAL WORKS Ltd. In the above document is given in good faith and to the best of our knowledge. However, no warranty is expressed or implied.



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