

Material Safety Data Sheet

פרמתרול פלוס - Permethrol Plus

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1. IDENTIFICATION OF SUBSTANCE AND COMPANY

Common name: Permethrol plus

Use: Insecticide

Formulation Type: EC

Manufacturer: Tapazol Chemical works ltd.

Address: HaSolela 1, West ind. Zone, Beit Shemesh, 9905415.

Tel: 972-2-992-6040 **Fax:** 972-2-9926050 **e-mail:** info@tapazol.co.il

2. COMPOSITION/INFORMATION ON INGREDIENTS

Name	CAS no.	Quantity (%)
Permethrin tech	52645-53-1	10
Piperonyl butoxide	51-03-06	40

3. HAZARDS IDENTIFICATION

Human hazards: The product is harmful by ingestion and may cause slight eye and skin irritation.

Environmental hazards: Highly toxic to fish, bees and aquatic organisms.

Keep out of drains and watercourses.

4. FIRST AID MEASURES

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

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

5. FIRE-FIGHTING MEASURES

Extinguishing media: Foam or water fog.

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

Explosion Hazard: Combustible. This material may support combustion at elevated temperatures.



Hazardous Decomposition Products: Carbon monoxide and carbon dioxide. Minor quantities of chlorine and hydrogen chlorine may be formed.

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

6. ACCIDENTAL RELEASE MEASURES

Spillage: Isolate and post spill area. Wear protective clothing and personal protective equipment as prescribed in Section 8 'Exposure Controls Personal Protection'. Keep unprotected persons and animals out of the area. Keep material out of streams and sewers. Dike to confine spill and absorb with a non-combustible absorbent such as clay, sand or soil. Vacuum, shovel or pump water into a drum and label content.

Clean Spillage: 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

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.



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8. EXPOSURE CONTROL/PERSONAL PROTECTION

Ventilation: Use local exhaust at all process locations where vapor or mist may be emitted. Ventilate all transport vehicles prior to unloading.

Eye/ Face protection: For splash, spray or mist exposure, wear chemical protective goggles (EN-166) or face shield.

Hand Protection: Wear chemical protective gloves made of materials such as Nitrile (EN-374/3). Thoroughly wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.

Respiratory protection: For splash, spray or mist exposure, as a minimum, a properly fitted half-face (EN-140) air-purifying respirator (EN14387) ABEKA1P3. Respirator use and selection must be based on airborne concentrations.

Body protection: 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. Launder all work clothing before reuse (separately from household laundry). 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: light yellow liquid.

Flash Point: 81°C (closed cup).

Boiling point: Vast range 140°C to 200°C.

Water solubility: < 0.02 ppm.

Vapour Density: Not applicable.





Vapour Pressure for Permethrin TC: 0.7 mPa at 20°C.

Specific Gravity: 0.9 gr/ml at 20°C.

pH : Not applicable.

10. STABILITY AND REACTIVITY

Conditions to avoid: Excessive heat and fire.

Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

Oral: LD₅₀ > 2000 mg/Kg (rat).

Dermal: LD₅₀ >2000 mg/Kg (rabbit).

Inhalation: LC₅₀ > 5000 mg/m³, 4h (rat) calculated.

Skin irritation: mild (rabbit).

Eye irritation: minimally (rabbit).

Skin sensitization: negative (mice).

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 indicated that contact with Permethrin has rarely produced skin sensations such a numbing, burning or tingling. These sensations are reversible and usually subside within 12 hours. Large, toxic doses administered to laboratory



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animals have produced symptoms such as diarrhea, salivation, tremors and intermittent convulsions. Overexposure of animals of Permethrin via inhalation has also produced hyperactivity and hypersensitivity.

PBO may cause vomiting and diarrhea.

Chronic Effects from Overexposure:

In studies with laboratory animals, Permethrin did not cause reproductive toxicity or teratogenicity. Chronic feeding studies in mice and rats with Permethrin resulted in the conclusion that Permethrin's potential for oncogenicity is low. 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 changes in the lungs and liver. An overall absence of genotoxicity has been demonstrated in mutagenicity testing with Permethrin.

PBO is not a carcinogen.

12. ECOLOGICAL INFORMATION

Physical Environmental Properties:

Permethrin has a moderate rate of degradation in soil. Because of its highly affinity for organic matter ($K_{OC}=86,000$), there is little potential for movement in soil or entry into ground water. The potential for bio-concentration and accumulation in the environment is low ($BCF=500$).

PBO is mobile in soil, does not leach to groundwater. Is biodegradable and not expected to bio-accumulate.

Environmental Toxicology:

Fish: Permethrin and PBO are highly toxic to fish (LC_{50} , 96 hr: 20 $\mu\text{g/l}$ to 50 $\mu\text{g/l}$). Marine species are often more tolerant of Permethrin than the fish and

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

Birds: Permethrin and PBO are slightly toxic to birds and oral LD₅₀ values are greater than 9000 mg/kg. Longer dietary studies showed that concentrations of up to 500 ppm in the diet had no effect on bird reproduction.

Bees: Permethrin is highly toxic to bees.

13. DISPOSAL CONSIDERATIONS

Open dumping of this pesticide is prohibited. If spilled material cannot be disposed of by use according to label instructions, an acceptable method of disposal is to incinerate in accordance with environmental regulations. Container which held these pesticides should be cleaned, prior to disposal, by triple-rinsing.

14. TRANSPORT INFORMATION

UN no.: 3082

Class: 9

RT MDR: ADR (Road)

Transport: Environmentally hazardous subst., liquid, (Permethrin 10%)

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

Transport: Pesticide, liquid, toxic n.o.s. (Permethrin 10%)

Group: III

Passenger: Yes

Cargo: Yes

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

Transport: marine pollutant (Permethrin 10%)



Group: III

15. REGULATORY INFORMATION

Hazards Identification:

Xn: Harmful

N: Very toxic to aquatic organisms

S phrases:

S52: Keep out of reach of children.

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

S20, 21: When using, do not eat, drink or smoke.

S49: Keep in original container.

S61: 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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