

# SAFETY DATA SHEET

## 1. COMPANY AND PRODUCT IDENTIFICATION

*Commercial name:* Permethrol 25% w/w

*Manufacturer:* Tapazol Chemical Works Ltd. 99052, Bet-Shemesh, Israel 972-2-9926040

## 2. COMPOSITION INFORMATION ON INGREDIENTS

*2.1: Chemical nature of the substance or preparation*

*Synonyms* 3-phenoxybenzyl (1R,S)-cis-trans-3(2,2-dichlorovinyl)-2,2-dimethylcyclopropane carboxylate

*Molecular formula:* C<sub>21</sub>H<sub>20</sub>Cl<sub>2</sub>O<sub>3</sub>

*Molecular weight:* 391.3

*Family:* Pyrethroid insecticide

*Utilisation:* Insecticide

### 2.2 Constituents

CAS	EINECS	Name	Symbols	R-Phrases
52645-53-1	613-058-00-2	Permethrin 25%	X <sub>n</sub> , N	20-22; 50

## 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

*Instructions for the doctor*

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

*Contact with skin:* Wash with plenty of soap and water.

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

*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.

*Note to medical doctor* 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.

*Special fire fighting procedures.*

Isolate fire area. Evacuate downwind. Wear full protective clothing and self-contained breathing apparatus. Do not breathe smoke gases generated.

*Hazardous decomposition products*

Carbon monoxide and carbon dioxide. Minor quantities of chlorine and hydrogen chloride may be formed

## 6. ACCIDENTAL RELEASE MEASURES

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. Vacuum or shovel into a drum and label content prior to disposal.

-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 CONTROLS AND PERSONAL PROTECTION

*Ventilation* Ventilate all transport vehicles prior to unloading.

*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.

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

*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.
Flash point	Not applicable
Boiling point	Not applicable
Vapour density	Not applicable
Vapour pressure	Negligible
pH	Not applicable
Solubility in water	forms a dispersion

## 10. STABILITY AND REACTIVITY

*Materials to avoid:* Excessive heat and fire

*Hazardous polymerization* Will not occur

## 11. TOXICOLOGICAL INFORMATION

*Acute toxicity* LD50=24000 mg/ kg (rat - oral)

LD50>8000 mg/ kg (rabbit - dermal)

LC50= 9.2 mg/l, 4 hr (rat - inhalation)

*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

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. ENVIRONMENTAL 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 (LC50+0.5µg/ L to 7.6 µg /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 LD50 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-nr: 3077

14.1 RT MDR: ADR (Road)

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

Class: 9

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

Transport Environmentally hazardous substance solid, (Permethrin 25%)

Class 9

Group III

Passenger yes

Cargo yes

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

Transport Severe marine pollutant (Permethrin 25%)

Class	9
Group	III

## 15. REGULATORY INFORMATION

15.1 Hazard identification 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

### 15.2 Safety sentences (S)

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

Permethrol 25 is an insecticide product for use by professionals.

The data contained herein are based on current knowledge and experience. They are made in conformity with applicable regulations and in good faith. This safety data sheet is additional to technical data sheets but do not replace them. It does not dispense the user, by all means, to know and apply all the regulatory requirements. He will undertake all responsibility concerning the precautions related to the use made with this product.

The purpose of this safety data sheet is to describe the product in terms of its safety requirements. The data does not signify any warranty with regard to the product properties. Revised 10.05.2012