

MATERIAL SAFETY DATA SHEET

PERMECIDE 50EC

CAS No.: Permethrin: 52645-53-1
UN No.: 1993

1. COMPANY AND PRODUCT IDENTIFICATION

Common name: Permethrin
Trade name: PERMECIDE 50 EC
Name & address of manufacturer:

HOP TRI AGROCHEMICALS CO., LTD.
Lot B14, Hiep Phuoc IP, Nha Be Dist., HCMc, Vietnam
Tel: +84.8.38734115 Fax: +84.8.38734117

Use: Insecticide
Emergency Telephone: +84.8.38734115

2. COMPOSITION/INGREDIENTS INFORMATION

Ingredients	CAS	Chemical name	Concentration (%)
Permethrin	52645-53-1	3-phenoxybenzyl (1RS,3RS;1RS,3SR)-3-(2,2-dichlorovinyl)-2,2-dimethylcyclopropanecarboxylate	50.0
Hydrocarbon solvent	8052-41-3	-----	40.5
Surfactant blend	-----	-----	9.5

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

3. HAZARD IDENTIFICATION

Physical Hazards: None

Health Hazards: Effects from overexposure result from ingestion or coming into contact with the skin or eyes. Symptoms of over exposure include increased hypersensitivity to touch and sound, tremors and convulsions. Contact with permethrin may produce skin sensations such as numbing, burning or tingling. These skin sensations are reversible and usually subside within 12 hours. Thermal decomposition and burning may form toxic by-products. For extensive exposure to fire, wear protective equipment.

Environmental Hazards: Highly toxic to fish and aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Read the entire MSDS for a more thorough evaluation of the hazards.

4. FIRST AID MEASURES

Skin: Wash with plenty of soap and water. Get medical attention if irritation occurs and persists.

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

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

Ingestion: Rinse mouth with water. Dilute by giving 1 or 2 glasses of water. Do not induce vomiting. Never give anything by mouth to an unconscious person. See a medical doctor immediately.

Note to Medical Doctor: Permethrin has low oral, dermal and inhalation toxicity. It is minimally irritating to the eyes and slightly irritating to the skin. The low oral toxicity of the product compared to the risk of pneumonitis from aspiration of hydrocarbon solvents suggests vomiting should not be induced. Consideration should be given to gastric lavage with an endotracheal tube in place. Activated charcoal and cathartic are recommended and nervous stimulation should be controlled with a sedative, e.g. barbiturates. Reversible skin sensations (paresthesia) 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

Flash Point: 44°C (111°F)

Autoignition Temperature: No data

Flammable Limits (STP): Not applicable

Extinguishing Media: Foam, CO₂ or dry chemical. Soft stream water fog only if necessary. Contain all runoff.

Special Fire Fighting Protective Equipment: Isolate fire area. Evacuate downwind. Wear full protective clothing and self contained breathing apparatus. Do not breathe smoke, gases or vapor generated.

Unusual Fire and Explosion Hazards: None known.

Degree of Fire/Explosion Hazard: Moderately combustible. When heated above the flash point, this material releases vapors which, when mixed with air, can burn or be explosive. Hazardous **Decomposition Products:** Chlorine, hydrogen chloride, carbon dioxide, carbon monoxide, and aldehydes.

6. ACCIDENTAL RELEASE MEASURES

Isolate and post spill area. Wear protective clothing and personal protective equipment as prescribed in Section 8 “Special Protective Information”. Keep unprotected persons and animals out of the area. Keep material out of streams and sewers. Dike to confine spill and absorb with an absorbent such as clay, sand or soil. Vacuum, shovel or pump waste into a drum and label content. To clean and neutralize spill area, tools and equipment, wash with a suitable solution of caustic or soda ash and an appropriate alcohol (methanol, ethanol or isopropanol). Follow this by washing with a strong soap and water solution. Absorb as above, any excess liquid and add to the drums of waste already collected. Repeat if necessary. Dispose of drummed waste according to the method outlined in Section 13.

7. HANDLING AND STORAGE

Store in a cool, dry, well-ventilated place. Do not use or store near heat, open flame or hot surfaces. Store in original containers only. Store at temperatures above 40°F (5°C). If crystals form, warm to room temperature 70°F (21°C) by room heating only for 24-48 hours, and shake occasionally until crystals dissolve and product appears uniform. Do not use external source of heat for warming container. 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

Personal protective recommendations for mixing or applying this product are prescribed on the product label. Information stated below provides useful, additional guidance for individuals whose use of handling of this product is not guided by the product label.

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

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).

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

Respiratory Protection: For splash, spray or mist exposure, wear as a minimum, a properly fitted half-face or full-face air-purifying respirator which is approved for pesticides or comparable certification organization. Respirator use and selection must be based on airborne concentrations.

Gloves: Wear chemical protective gloves made of materials such as nitrile, neoprene or Viton brand. Thoroughly wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Amber liquid, faint mild petroleum

Melting Point: No data

Vapor Pressure (mmHg at 20°C): No data

Vapor Density (air = 1): No data

Solubility in Water: Emulsifiable Concentrate

pH: 4.8 – 5.0 @ 20°C (6% in water)

Specific Gravity: 1.039 @ 20°C (water = 1) %

Molecular Weight: 391.3 (permethrin)

Weight per Volume: 8.65 lb. /gal (1039 g/L)

10. STABILITY AND REACTIVITY

Stability: Stable in normal use conditions.

Conditions to avoid: Avoid excessive heat and flame.

Materials to avoid: None under normal condition of use.

Incompatibility: Oxidizing & alkaline materials.

Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity:

Rat LD₅₀ oral, Rats >2000 mg/kg bw (Permethrin)

Rat LD₅₀ dermal, Rats >2000 mg/kg bw (Permethrin)

General: Permethrin has low oral, dermal and inhalation toxicity. It is minimally irritating to the eyes and slightly irritating to the skin.

Ingestion: Vomiting after ingestion of this product may cause aspiration of hydrocarbon solvents into the lungs that may result in fatal pulmonary edema.

Skin contact: Experience to date indicates that contact with permethrin has rarely produced skin sensations such as numbing, burning or tingling. These skin sensations are reversible

and usually subside within 12 hours. Large toxic doses of Permethrin administered to laboratory animals have produced central nervous system effects with symptoms that include hypersensitivity to touch and sound, tremors, and clonic convulsions.

Inhalation: Over exposure to animals via inhalation has also produced symptoms such as squinting eyes, irregular and rattling breathing and ataxis. Inhalation of hydrocarbon solvent vapors may cause dizziness, disturbances in vision drowsiness, respiratory irritation, and eye, skin and mucous membrane irritation.

Long term studies:

Carcinogenicity: Non-carcinogenic in rats
 Mutagenicity: Non-mutagenic in rats
 Reproductive toxicity: Not a reprotoxic in rats.
 Teratogenicity toxicity: Non-teratogenic effects in rats.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Guppy, Poecilia reticulata, 96 hours: LC₅₀: 8.9 µg/l (Permethrin)
 Common Carp, Cyprinus carpio, 96 hours: LC₅₀: 0.145 mg/l (Permethrin)
 Daphnia magna, 24 hours: EC₅₀: 0.020 mg/l (Permethrin)
 Scenedesmus subspicatus, 72 hours: EC₅₀: > 0.022 mg/l (Permethrin)
 Activated sewage sludge, 3 hours: EC₅₀: >1000mg/l (Permethrin)
 Acute toxicity Earthworm, Lampito mauritii: LC₅₀ >1200 mg/kg (Permethrin)

Mobility: Strongly adsorbed in soil particles with no risk of leaching.

Persistence and degradability: Very toxic to aquatic organisms may cause long-term adverse effects in the aquatic environment. DT₅₀ pH 4 at 25°C: > 1 year (water).

13. DISPOSAL CONSIDERATIONS

Product disposal:

Do not empty into drains or waterways. Disposal of product would usually be by incineration in an appropriate licensed commercial incinerator. Advice may be obtained from local waste regulation authorities.

Container disposal:

Puncture container to avoid re-use. Dispose of empty container in a sanitary landfill or by incineration, or, if allowed by local authorities, by burning. If burned, stay out of smoke. Do not cut or weld metal containers. Vapors that form may create an explosion hazard. Follow advice on product label and/or leaflet.

14. TRANSPORT INFORMATION

Name of dangerous good transport regulations	UN	Shipping name	Class	Package	Lables	Others
Regulations of Vietnam - Decree 104/2009/NĐ-CP - Decree 109/2006/NĐ-CP - Decree 29/2005/NĐ-CP	1993	Flammable Liquid, n.o.s (contains Hydrocarbon solvent)	3	III	Not available	Not available

Regulations of International: Sea transport (IMDG):	1993	Flammable Liquid, n.o.s (contains Hydrocarbon solvent)	3	III	Not available	Not available
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15. REGULATORY INFORMATION

SARA Title III (Superfund Amendments and Reauthorization Act)

Section 302 Extremely Hazardous Substances (40CFR 355): Not listed

Section 302.4 Reportable Quantity (RQ) (40CFR 355): None

Section 311 Hazard Categories (40 CFR 370): Immediate, Delayed, Fire

Section 312 Threshold Planning Quantity (40 CFR 370): The threshold planning quantity for this product, if treated as a mixture, is 10,000 lb. This product contains the following ingredients with a TPQ of less than 10,000 lb.: None

Section 313 (40 CFR 372): This product contains the following ingredients subject to

Section 313 reporting requirements: permethrin (39.1%)

CERCLA Reportable Quantity (RQ) (40 CFR Table 302.4): Not listed

EPA signal word: CAUTION

16. OTHER INFORMATION

Version 3

Revision Date 11/07/2014

Print Date 31/07/2014

Responsibility: HOP TRI AGROCHEMICAL. Co., Ltd

The information provided in this Material Safety Data Sheet is based on the appropriate and newest knowledges. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification.

The product stated within this MDSD might contain other hazardous properties depending on the usage and contacting context.

Hop Tri will disclaim all responsibility for use not right with instructions in this MSDS.