

MATERIAL SAFETY DATA SHEET

PERMETHRIN TECHNICAL

Revision: 2

Date Issued: 9/16/05

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Company: United Phosphorus, Inc.
423 Riverview Plaza
Trenton, NJ 08611

Product Information: 1-800-247-1557 or www.upi-usa.com

Product Name: PERMETHRIN TECHNICAL

Product use: For formulation into insecticides

FOR MEDICAL EMERGENCIES, CONTACT the National Pesticide Information Center 1-800-858-7378
FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300

SECTION 2 COMPOSITION/INFORMATION ON INGREDIENTS

Component Name:	CAS No.	Weight %, Nominal	OSHA PEL/TLV
Permethrin* (3-phenoxyphenyl)methyl (±)-cis, trans- 3-(2,2-dichloroethenyl)-2,2-dimethylcyclopropane carboxylate	52645-53-1	94.0	Not Established
Other**	NA	6.0	None

*Active Ingredient, max. 42% (±)-cis; min. 58% (±) trans

**Other ingredients, which are maintained as trade secrets, are any substances other than an active ingredient contained in this product.

SECTION 3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION:

- **YELLOWISH BROWN LIQUID, ODORLESS**
- **CAUSES EYE IRRITATION**
- **MAY BE HARMFUL IF SWALLOWED, INHALED OR ABSORBED THROUGH THE SKIN**
- **AVOID CONTACT WITH EYES, SKIN, OR CLOTHING**
- **AVOID BREATHING VAPORS**
- **KEEP OUT OF REACH OF CHILDREN**
- **TOXIC TO BEES, FISH AND AQUATIC ORGANISMS**

POTENTIAL HEALTH EFFECTS: Effects from overexposure result from inhaling or coming into contact with the skin. Signs and symptoms that may be seen, usually within several hours of exposure, include but are not limited to, hypersensitivity to touch or sound, convulsions, tremors, diarrhea, salivation, and hyperactivity. Contact with this product may produce skin irritation and sensitization, an allergic reaction, which becomes evident on re-exposure to this material.

SECTION 4 FIRST AID MEASURES

IF SWALLOWED:

- Call a poison control center or doctor.
- Do not induce vomiting unless told to do so by a poison control center or doctor.
- Do not give any liquid to the person. Do not give anything by mouth to an unconscious person.

IF ON SKIN OR CLOTHING:

- Remove contaminated clothing and shoes immediately. Wash contaminated area with soap and large amount of water. Wash contaminated clothing separately.
- Get medical attention if irritation persists.

IF IN EYES:

- Flush immediately with plenty of water while holding eyelids open.
- Remove contact lenses if present, after 5 minutes, then continue rinsing eye.

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NOTES TO PHYSICIAN: Remove from exposure area to fresh air immediately. Treat symptomatically. Do not administer milk, cream or other substances containing vegetable or animal fats which enhance absorption of lipophilic substances.

SECTION 5 FIRE FIGHTING MEASURES

FLASH POINT: 100°C
EXTINGUISHING MEDIA: Dry chemical, carbon dioxide, halon, or standard Foam (1987).
FIRE/EXPLOSION HAZARDS: Can burn in fire releasing irritating and toxic gases due to thermal decomposition or combustion.
FLAMMABLE LIMITS: Non-explosive.
FIRE FIGHTING INSTRUCTIONS: Move containers from fire if possible. Fight fire upwind from a safe distance. Do not scatter spilled material with high pressure water streams. Dike fire control water for later disposal. Use agents suitable for type of surrounding fire. Avoid breathing hazardous vapors, keep upwind.
HAZARDOUS COMBUSTION: Normal combustion forms hydrogen chloride, oxides of chlorine, hydrogen and carbon.

SECTION 6 ACCIDENTAL RELEASE MEASURES

FOR CHEMICAL EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300

Stop the source of the spill if safe to do so. Contain the spill to prevent further contamination of the soil, surface water, or ground water.

LAND SPILLS OR LEAKS:

CONTAINMENT: Isolate hazard area and keep unnecessary personnel from entering.

CLEANUP: For small leaks or spills use absorbent material like sand, vermiculite or other inert absorbent. Place contaminated material into container for later disposal.

For large spills, dike area using absorbent or impervious material such as clay or sand. Place absorbed material into container for disposal. After removal, scrub area with detergent and water and neutralized with dilute alkaline solutions of soda ash or lime. This material is a water pollutant and should be prevented from contaminating soil or entering sewage and drainage systems and bodies of water.

FOR SPILLS IN WATER:

CONTAINMENT: This material will disperse or dissolve in water. Stop the source of the release. Contain and isolate to prevent further release into soil, surface water and ground water.

CLEANUP: Burn in high temperature incinerator with effluent scrubbing; alternatively, treat with 5% caustic soda as a hydrolyzing agent for 7 days; comply with local regulations.

SECTION 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. Keep out of reach of children and animals. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Proper ventilation is required when handling or using this product to keep exposure to airborne contaminants below the exposure limit. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

PERSONAL PROTECTIVE EQUIPMENT (PPE):

EYE PROTECTION: Safety goggles or full face shield.

CLOTHING: Wear long-sleeved shirt and long pants, chemical resistant shoes and socks. Remove contaminated clothing and wash before rewearing. Wash separately from other laundry.

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GLOVES: Chemical resistant gloves such as barrier laminate, nitrile rubber, neoprene rubber or Viton®.
RESPIRATOR: When handling in enclosed areas where exposure limits may be exceeded, use a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approved number prefix TC-14G).

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this products concentrate. Do not reuse them. Follow manufacturers instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Yellowish brown liquid
ODOR: Odorless
BOILING POINT: 285.2°C
BULK DENSITY: 1.23 g/cm³ at 20°C
SOLUBILITY: 0.09 mg/l (water)
VAPOR PRESSURE: 0.045 m Pa at 25°C
pH: 6.10

SECTION 10 STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable but may decompose if burned.
CONDITIONS TO AVOID: Avoid excess heat and fire.
COMPATIBILITY: Avoid oxidizing materials.
HAZARDOUS DECOMPOSITION PRODUCTS: Thermal decomposition may emit hydrogen chloride and oxides of carbon and hydrogen.
HAZARDOUS POLYMERIZATIONS: Will not undergo polymerization.

SECTION 11 TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:
Oral LD₅₀: 504-791 mg/kg rat (cis/trans ratio of 40:60)
Dermal LD₅₀: >2000 mg/kg (rat)
Inhalation LC₅₀: (4 hr) 5.4 mg/L (rates, mice)
Eye Irritation: Causes moderate irritation (rabbit)
Skin Irritation: Slight irritant (rabbit)
Sensitization: Negative (guinea pig). May cause skin irritation in certain individuals.

SECTION 12 ECOLOGICAL INFORMATION

TOXICITY: This product is extremely toxic to fish, aquatic invertebrates, and honeybees. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other bodies of waters unless in accordance with the requirements of a National Pollutant discharge Elimination System (NDPES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or the Regional Office of the Environmental Protection Agency.

FISH TOXICITY:
Rainbow Trout LC₅₀ (96 hr): 2.5 ug/L
Bluegill Sunfish LC₅₀ (96 hr): 1.8 ug/L

AVIAN TOXICITY:

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Mallard Duck LD₅₀: 11,275 mg/kg b.w.
Japanese Quail LD₅₀: 23,000 mg/kg b.w.

SECTION 13 DISPOSAL CONSIDERATIONS

DISPOSAL METHODS: Open dumping or burning of this material or its packaging is prohibited. If spilled material cannot be disposed of by use according to instructions, an acceptable method of disposal is to incinerate in accordance with local, state and national environmental laws, rules, standards and regulations. However, because acceptable methods of disposal may vary by location and regulatory requirements may change, the appropriate agencies should be contacted prior to disposal.

EMPTY CONTAINER: Non-returnable containers which held this material should be cleaned prior to disposal, by triple rinsing. Containers which held this material may be cleaned by being triple rinsed, and recycled, with rinsate being incinerated. Do not cut or weld metal containers. Vapors that form may create an explosion hazard.

SECTION 14 TRANSPORT INFORMATION

Not regulated by DOT.

SECTION 15 REGULATORY INFORMATION

REGULATIONS UNDER FIFRA: All pesticides are governed under FIFRA (Federal Insecticide, Fungicide and Rodenticide Act). Therefore, the regulations presented below are pertinent only when handled outside of the normal use and applications of pesticides. This includes waste streams resulting from manufacturing/formulation facilities, spills or misuse of products, and storage of large quantities of products containing hazardous or extremely hazardous substances.

OTHER U.S. FEDERAL REGULATIONS:

CERCLA RQ*: None

SARA TITLE III:

Sara (313) Chemicals: Permethrin
Sara (313, 312): Immediate, delayed

Sara Section 302: Not listed

STATE REGULATIONS: Each state may promulgate standards more stringent than the federal government. This section cannot encompass an inclusive list of all state regulations. Therefore, the user should consult state or local authorities.

*RQ: Reportable Quantity.

SECTION 16 OTHER INFORMATION

	HEALTH	FLAMMABILITY	REACTIVITY	OTHERS
NFPA RATING	2	1	1	None

Least – 0, Slight – 1, Moderate – 2, High – 3, Extreme – 4. These values are obtained using professional judgment and were not available in the guidelines or published evaluations prepared by the National Fire Protection Association.

THIS INFORMATION IN THIS MSDS IS BASED ON DATA AVAILABLE AS OF THE REVISION DATE GIVEN HEREIN, AND BELIEVED TO BE CORRECT. CONTACT UNITED PHOSPHORUS, INC. TO CONFIRM IF YOU HAVE THE MOST CURRENT MSDS. JUDGMENTS AS TO THE SUITABILITY OF THE INFORMATION HEREIN FOR THE INDIVIDUAL'S OWN USE OR PURPOSES IS NECESSARILY THE INDIVIDUAL'S OWN RESPONSIBILITY. ALTHOUGH REASONABLE CARE HAS BEEN TAKEN IN THE PREPARATION OF SUCH INFORMATION, UNITED PHOSPHORUS, INC. EXTENDS NO WARRANTIES, MAKES NO REPRESENTATIONS, AND ASSUMES NO RESPONSIBILITY AS TO THE ACCURACY OR SUITABILITY OF SUCH INFORMATION FOR APPLICATION TO THE INDIVIDUAL'S PURPOSES OR THE CONSEQUENCES OF ITS USE.

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This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-APPROVED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety, and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

MSDS REVISION STATUS: update company information, update physical characteristics, update shipping information, update NFPA rating.