



Product: HOUSE & YARD INSECT CONTROL
EPA Reg. No.: 869-236
Effective Date: 12/01/2002

MATERIAL SAFETY DATA SHEET

Emergency Phone 800/535-5053

Size	Product Number	UPC Code
Gallon	40801	0 49424 40801 6

Note: Be sure to compare the EPA registration number as given on the MSDS with the EPA registration number as given on the label as some products have had the active ingredients changed without a corresponding change in the UPC number or in the item description.

1. INGREDIENTS

Deltamethrin:	0.02%	CAS Number: 52918-63-5
Other Ingredients:	99.98%	

2. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM:	Clear, viscous gel
pH:	Not applicable.
VAPOR PRESSURE:	Not available.
VAPOR PRESSURE (AIR=1):	Not available.
COLOR:	Clear
ODOR:	Odorless
FLASH POINT:	>200°F >93°C
BOILING POINT:	>212°F >100°C
MELTING/FREEZING POINT:	32°F 0°C
SPECIFIC GRAVITY:	>1.00
PACKING DENSITY:	Not available
SOLUBILITY (H2O):	Not applicable
SOLUBILITY IN SOLVENTS/OIL:	Not available
DUST EXPLOSION SEVERITY:	Not applicable

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:	This product is extremely toxic to fish.
EYES:	May cause eye irritation.
SKIN:	May cause skin irritation.

4. FIRST AID MEASURES

EYES:	Immediately flush eyes with plenty of 1% physiological saline for 5 minutes while holding eyelids open. If no saline is available, flush eyes with plenty of water.
NOTE: GEL MAY BE DIFFICULT TO REMOVE USING ONLY WATER.	
SKIN:	Wash with plenty of soap and water. Get medical attention if irritation persists.
INGESTION:	Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. If person is unconscious, do not give anything by mouth and do not induce vomiting.

5. FIRE FIGHTING MEASURES

FLASH POINT:	>200°F >93°C
FIRE AND EXPLOSION HAZARDS:	Do not use this product on electrical equipment due to the possibility of shock hazard.
EXTINGUISHING MEDIA:	Carbon Dioxide, Dry Chemical, Foam or Water.
FIRE FIGHTING PROCEDURES:	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH approved (or equivalent) and full protective gear. Keep upwind. Isolate hazard area. Avoid inhalation of smoke and fumes.



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Use water or foam to reduce fumes. Do not touch spilled material. If possible, move containers from area. Extinguish only if flow can be stopped. Use flooding amounts of water as a fog. Cool containers with flooding amounts of water from as far a distance as possible. Avoid breathing vapors.

FLAMMABILITY

CLASSIFICATION/RATING:

NFPA/OSHA Class: IIIB

NFPA Rating (Fire): 1

6. ACCIDENTAL RELEASE MEASURES

Use proper protective equipment to minimize personal exposure. Take all necessary action to prevent and to remedy the adverse effect on the spill. Ensure that the disposal is in compliance with all Federal, Provincial, and local regulations. Refer to Section 15 for applicable Reportable Quantity (RQ) and other regulatory requirements.

LAND SPILL OR LEAK

SMALL SPILLS:

Absorb with an inert absorbent material such as granular clay, saw dust, or pet litter. Sweep up carefully while avoiding the formation of a dust cloud. Place in an approved chemical waste container for disposal.

Rinse spill area with small amount of soapy water. Contain and absorb the rinsate with inert absorbents and place into the same disposal container. Area can be washed with water to remove the last trace residue. Do not allow water to contaminate water supplies or sewers.

LARGE SPILLS:

Eliminate all ignition sources. Stop leak if you can do so without coming in direct contact with spilled material. Dike for ahead of liquid spill for later disposal. All equipment used to clean up spill should be grounded. Prevent entry into waterways, sewers, basements or confined areas. Inform appropriate authorities immediately if contamination occurs.

7. HANDLING AND STORAGE

HANDLING PRECAUTIONS:

Avoid contact with skin.

STORAGE PRECAUTIONS:

Store product in original container in a cool, dry, locked place out of the reach of children. Protect from freezing.

WORK/HYGIENIC PRACTICES:

Wash thoroughly with soap and water after handling.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS:

Control airborne concentrations below the appropriate exposure guideline (see Section 1 for applicable OSHA/ACGIH Exposure Limits). Local exhaust ventilation may be necessary.

EYE/FACE PROTECTION:

Wear safety glasses, splash goggles, or face shield.

SKIN PROTECTION:

Wear chemical-resistant gloves (Neoprene, Nitrile, PVC) and other protective clothing to avoid skin contact.

RESPIRATORY PROTECTION:

Ensure good ventilation. If not adequate, use a chemical cartridge-type respirator approved by the National Institute of Occupational Health and Safety.

GENERAL PROTECTION:

Eye wash facility and safety shower should be available.

9. STABILITY AND REACTIVITY

STABILITY:

Stable

HAZARDOUS POLYMERIZATION:

Will not occur.

10. TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

There is no acute toxicological data available for this formulation.

THE FOLLOWING DATA WERE

DEVELOPED WITH:

Deltamethrin, the active ingredient.



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**CHRONIC TOXICITY AND
CARCINOGENICITY:**

General neurological symptoms were exhibited in studies with rats, mice and dogs. These symptoms included unsteadiness, abnormal gait, tremors and liquid feces. No histopathologic findings were observed except some signs of slight hepatotoxicity in mice. No Observable Effect Levels (NOEL's) were 1 mg/kg/day in the 2-year rat and dog studies. The NOEL for the 2-year mouse.

**REPRODUCTIVE AND DEVELOPMENTAL:
TOXICITY:**

No developmental effects were observed in studies with rabbits in the absence of maternal toxicity. The development NOEL for the rat study was 11 mg/kg/day (highest dose tested). The developmental NOEL in rabbits was 25 mg/kg/day. A 2-generation reproductive study with rats produced clinical signs of toxicity, reduced body weight gain and mortality in both parents and offspring.

NEUROTOXICITY:

Deltamethrin does not inhibit acetylcholinesterase. Neurobehaviorial effects including unsteadiness, excessive salivation, vomiting, liquid feces, uncoordinated movement, tremors, spasmodic convulsions which are typically related to Central Nervous System (CNS) stimulation, were observed in some studies. The NOEL for these studies was 1 mg/kg/day or higher.

**ACUTE INHALATION EFFECTS:
MUTAGENICITY
(GENETIC DEFECTS):**

4-Hour LC50 > 20.02 mg/L

No evidence of genotoxicity was observed in a battery of in-vitro and in-vivo studies.

11. ENVIRONMENTAL INFORMATION

ENVIRONMENTAL PRECAUTIONS:

This product is extremely toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Use with care when applying in areas adjacent to any body of water. Do not contaminate water when disposing of equipment washwaters.

**THE FOLLOWING DATA WERE
DEVELOPED WITH:
ECOLOGICAL TOXICITY:**

Technical Deltamethrin

Deltamethrin Technical is highly toxic to fish and other aquatic species, however, the toxicity to avian species is relatively low.

AVIAN:

Bobwhite Quail (LD50): >2250 mg/kg
Bobwhite Quail (dietary LC50): >5620 ppm
Mallard Duck (dietary LC50): >8039 ppm
Quail Reproduction (repro NOEL): 450 ppm
Duck Reproduction (repro NOEL): 450 ppm

AQUATIC:

Rainbow Trout (96-hr LC50): 0.26 ppb
Bluegill Sunfish (96-hr LC50): 0.17 ppb
Sheepshead Minnow (96-hr LC50): 0.48 ppb
Eastern Oyster (96-hr LC50): 8.2 ppb
Mysid Shrimp (96-hr LC50): 4.6 ppt; NOEC = 1.ppt
Mollusk Shell Deposition (EC50): 8.2 ppb
Chronic Toxicity-Fathead Minnow: MATC = 24 ppt
Chronic Daphnia Toxicity: MATC = 6.0 ppt

ENVIROMENTAL FATE:

The major routes of dissipation are soil binding and soil microbial degradation. Although soil binding is strong, it is not immediate. It appears that spray drift is the only significant route of exposure to



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aquatic organisms. However, deltamethrin's strong binding capacity to slime, plants, sediment, etc., might rapidly prevent the availability of deltamethrin for bioconcentration in aquatic systems. Additionally, its insolubility in water will be a factor in limiting its bioconcentration as well. Deltamethrin hydrolyzes under alkaline conditions. Leaching studies indicate that deltamethrin is immobile.

Water Solubility:	<0.20 µg/l @ 25°C
Hydrolytic Half-Life:	2.28-2.70 days @ pH 9.0
Photolytic Half-Life:	64-86 days (water)
	9 days (soil)
Soil Half-Life:	14-40 days (cropped plots)
	37-69 days (bare ground) in field dissipation studies
Kads:	960-4750 depending on soil type
Koc:	204,000-577,000 depending on soil type
Bioconcentration Factor	
(BCF in bluegill sunfish):	189-3630x

12. DISPOSAL CONSIDERATIONS

Do not reuse empty container. Wrap container in several layers of newspaper and discard in trash.

RCRA INFORMATION

RCRA Hazardous Waste Ingredients: None

13. TRANSPORTATION INFORMATION

PROPER SHIPPING NAME: Not DOT regulated.

14. REGULATORY INFORMATION

CARCINOGENICITY:

NTP:	No
IARC:	No
OSHA:	No

SARA TITLE III 311/312 HAZARD CLASSES:

Acute Health Hazard:	Yes
Chronic Health Hazard:	No
Fire Hazard:	No
Sudden Release of Pressure Hazard:	No
Reactivity Hazard:	No

SARA TITLE III NOTIFICATION AND INFORMATION:

Section 302 (EHS) ingredients:	None
Section 304 (CERCLA & EHS) ingredients:	None
Section 313 ingredients:	None

US STATE REGULATORY INFORMATION

CALIFORNIA (Proposition 65): This product contains trace amounts of benzene (0.0006%) which is known to the State of California to cause cancer, birth defects or other reproductive harm.



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15. OTHER INFORMATION

HMIS HAZARD RATING

- HEALTH: 1 Slight
- FIRE: 1 Slight
- REACTIVITY: 0 Negligible
- PROTECTION: B

NFPA HAZARD RATING

- HEALTH: 1 Slight
- FIRE: 1 Slight
- REACTIVITY: 0 Negligible
- SPECIAL: -

MSDS IDENTIFICATION

CODE/NUMBER:

HPC2

16. DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES

Buyer assumes all risks of use, storage or handling of this material not in strict accordance with directions given herewith.

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