

# Material Safety Data Sheet

Date last revised: 2 January 2003

## I. General Information

<b>Chemical Name and Synonyms</b> Permethrin	<b>Trade Name &amp; Synonyms</b> FLIT 13.3 EC
<b>Chemical Family</b> Synthetic Pyrethroid	<b>EPA Registration Number</b> 4-350-8329
<b>Proper DOT Shipping Name</b> Agricultural insecticide. N.O.I., Non-hazardous	<b>DOT Hazard Classification</b> Non-Hazardous
<b>Registrant</b> Clarke Mosquito Control Products Inc.	<b>Manufacturer's Phone Number</b> (630) 894-2000
<b>Registrant's Address</b> 159 North Garden Avenue Roselle, Illinois 60172	<b>INFOTRAC (Transportation/Spill Emergency)</b> 1-800-535-5053 <b>Poison Control Center (Medical Emergency)</b> 1-800-214-7753

## II. Ingredients

Principal Hazardous Components	CAS #	OSHA PEL-TWA	Percent
Permethrin	52645-53-1	Not established	13.30% w/w
Inert ingredients*		2000mg/m3	86.70%
*Contains petroleum distillates			

## III. Physical Data

<b>Boiling Point (°F):</b> 198-200 C at 0.3mm HG	<b>Specific Gravity (H<sub>2</sub>O = 1):</b> 1.190 to 1.272 at 20 C
<b>Vapor Pressure (mm Hg.):</b> 3.4 x 10 Torr at 25 C	<b>Vapor Density:</b> > 1 (Air=1)
<b>Solubility in Water:</b> 0.07 +/- 0.02 ppm	<b>pH:</b> 5.0-6.0
<b>Appearance:</b> Viscous yellow to brown liquid	<b>Odor:</b> Faint, Mild

## IV. Fire & Explosion Hazard Data

**Flash Point (Test Method:** > 210 F (Closed Cup)

**Extinguishing Media:** Water fog, foam

**Special Fire Fighting Procedures:** Isolate fire area. Evacuate downwind residents and all areas where fire seriously threatens the product containers. Wear full protective clothing, including rubber boots, neoprene gloves and self-contained breathing apparatus. Cool fire exposed areas and equipment. Do not breathe or contact smoke or vapors. Do not use direct stream of water. Material may float and ignite.

**Conditions to Avoid (Incompatibility):** Heat and fire. Thermal decomposition and burning may produce toxic by-products and an explosion hazard.

**Hazardous Decomposition Products:** Carbon monoxide and/or carbon dioxide. Chlorine and hydrogen chloride may be formed.

## V. Reactivity Data

<b>Stability:</b>	Stable	<b>Hazardous Polymerization:</b>	Will not occur
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## VI. Health Hazard Information

**Primary Route of Entry:** Inhalation, Ingestion

**Effect of Acute Overexposure:** Data available to date on human exposure suggests that permethrin does not produce skin sensation, (feelings of numbing and tingling), although other pyrethroids have been known to cause these reactions. If they occur, these sensations subside and disappear within a few hours. Large, toxic doses administered to laboratory animals have produced central nervous system effects with symptoms that include diarrhea, salivation, bloody nose, tremors and intermittent convulsions. Overexposure of animals to permethrin via inhalation has also produced 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 potential for induction of oncogenicity in experimental animals is low and that the likelihood of oncogenic effects in humans is nonexistent 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 lack of genotoxicity has been demonstrated in mutagenicity testing with permethrin.

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## VII. Emergency First Aid

**Skin Contact:** Remove contaminated clothing and wash affected areas of skin with soap and water immediately.

**Eye:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.

**Inhalation:** Remove affected person to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. Get medical attention.

**Ingestion:** Drink one to two glasses of water and induce vomiting by touching the back of the throat with a finger or by administering syrup of ipecac. Obtain Medical attention. Do not induce vomiting or give anything by mouth to an unconscious person.

**Note to Physician:** Permethrin has a low oral toxicity, moderate dermal toxicity and moderate eye irritation. Initial treatment is removal of exposure by washing, emesis or lavage and is followed by symptomatic and supportive care.

## VIII. Environmental Protection Procedures

**Spill Response:** Isolate and post spill area. Wear prescribed protective clothing and equipment. Keep material out of streams and sewers. Contain and absorb spilled material with an absorbent material such as sand, sawdust, Fuller's earth, etc. Place in an approved drum and dispose of according to state, local, and Federal regulations. To decontaminate spill area, tools and equipment, wash with a suitable solution and dispose of solution. Clean spill area of residues and absorbent.

**Storage:** Store sealed and upright in its original labeled containers, in a cool, dry locked place, out of reach of children. Replace bungs and close tightly. Do not put concentrate or dilute material into food or drink containers. Avoid exposure to extreme heat.

**Waste Disposal:** Do not contaminate water, food, or feed by storage or disposal. Pesticide Disposal: Pesticide, spray mixture or rinse water that cannot be used according to label instructions must be disposed of at or by an approved waste disposal facility. Container Disposal: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or dispose of in a landfill or by other approved State and local procedures. For guidance, contact your State Water Board or Regional Office of the EPA.

**Other Precautions:** Do not contaminate water by cleaning of equipment or disposal of wastes.

## IX. Special Protection Information

**Eye Protection:** OSHA-approved safety glasses, goggles or face shield suggested when mixing or loading tank.

**Skin Protection:** Handlers should wear protective clothing and chemical resistant gloves when mixing or loading tank. Shower after handling or applying the product. Wear gloves made of neoprene when handling this product.

**Respiratory Protection:** For moderate vapor liquid mist exposure, use half face or full-face air-purifying respirators that are NIOSH/MSHA approved for pesticides.

**Ventilation:** Thoroughly ventilate all transport vehicles prior to unloading. General exhaust is considered sufficient.

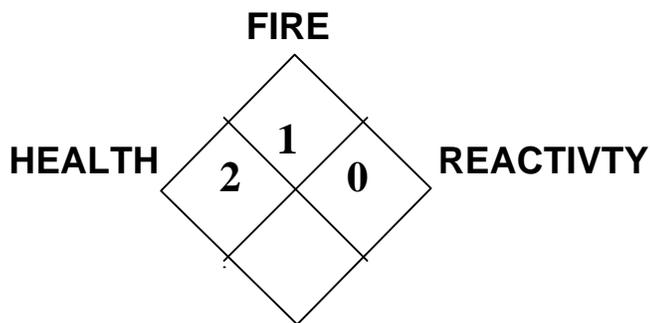
**Carcinogenicity:** NTP: no IARC: no OSHA: no

**Other:** IMPORTANT. Read and observe all precautions and instructions on the label.

## X. Other Regulatory Information

**SARA Title III notifications and information :** This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) of 1986 and 40 CFR 372:

CAS Number	INGREDIENT NAME	PERCENTAGE BY WEIGHT
52645-53-1	Permethrin	13.3



**NFPA Code Key**

4 = Severe  
3 = Serious  
2 = Moderate  
1 = Slight  
0 = Minimal

The information and statements herein are believed to be reliable but are not to be construed as a warranty or representation for which we assume legal responsibility. Users should undertake sufficient verification and testing to determine the suitability for their own particular purpose of any information or products referred to herein. **NO WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE IS MADE.**