

## MATERIAL SAFETY DATA SHEET



### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** ORTHO® HomeDefense® Perimeter & Indoor Insect Killer (Ready-To-Use)  
**PRODUCT DESCRIPTION:** Insecticide

**MANUFACTURER**  
 The ORTHO Group  
 P.O. Box 1749  
 Columbus, OH 43216

**24 HR. EMERGENCY TELEPHONE NUMBERS**  
**Emergency Phone:** 1-800-225-2883

**EPA REG. NO.:** 239-2663A PN: 6061

### 2. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt. %	CAS#
Bifenthrin	0.05	82657-04-3
Other Ingredients	99.95	

### 3. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

**PHYSICAL APPEARANCE:** White uniform liquid with slight solvent odor.

**IMMEDIATE CONCERNS:** CAUSES MODERATE EYE IRRITATION  
 AVOID CONTACT WITH EYES OR CLOTHING  
 KEEP OUT OF REACH OF CHILDREN.

#### POTENTIAL HEALTH EFFECTS

**EYES:** This substance may cause moderate eye irritation. See Toxicological Information, section 11.

**SKIN:** This substance is not expected to cause skin irritation and is only slightly toxic if absorbed through the skin. See Toxicological Information, section 11.

**INGESTION:** This substance is slightly toxic if swallowed. The degree of injury will depend on the amount absorbed from the gut. See Toxicological Information, Section 11.

**INHALATION:** Overexposure to the spray mist may be irritating to the respiratory tract. If inhaled, this substance is considered practically non-toxic to internal organs. See Toxicological Information, section 11.

### 4. FIRST AID MEASURES

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

**SKIN:** If on skin or clothing, take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

**INGESTION:** If swallowed, call a poison control center or doctor immediately for treatment advice. Have person sip glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Never give anything by mouth to an unconscious person.

**INHALATION:** Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

### 5. FIRE FIGHTING MEASURES

**FLASHPOINT AND METHOD:** None

**EXTINGUISHING MEDIA:** Use CO2, Dry Chemical or Foam extinguishing media.

**HAZARDOUS COMBUSTION PRODUCTS:** Heating this material may generate carbon monoxide, carbon dioxide, hydrogen chloride and hydrogen fluoride.

**FIRE FIGHTING PROCEDURES:** Products of combustion from fires involving this material may be toxic. Avoid breathing smoke and mists. Avoid personnel and equipment contact with fallout and runoff. Minimize the amount of water used for fire fighting. Do not enter any enclosed area without full protective equipment, including self-contained breathing equipment. Contain and isolate runoff and debris for proper disposal. Decontaminate personal protective equipment and fire fighting equipment before reuse. Read the entire document.

**6. ACCIDENTAL RELEASE MEASURES**

**SMALL SPILL:** While wearing rubber gloves, soak up spilled material with paper towels and discard in trash.

**LARGE SPILL:** Liquid spills on floor or other impervious surfaces should be contained or diked, and should be absorbed with attapulgite, bentonite or other absorbent clays. Collect contaminated absorbent, place in plastic-lined metal drum and dispose of in accordance with instructions provided under Section 13. "DISPOSAL". Thoroughly scrub floor or other impervious surface with a strong industrial type detergent solution and rinse with water. For liquid spills that soak into the ground, contact the applicable Federal, State and or County Health Dept. for disposal recommendations. If disposal is required then refer to Section 13 "DISPOSAL" for instructions. Leaking containers should be separated from non-leakers and either the container or its contents transferred to a drum or other non-leaking container and disposed of in accordance with instructions provided under Section 13 "Disposal". Any recovered spilled liquid should be similarly collected and disposed of. Do not contaminate water, foodstuffs or feed by storage or disposal.

**GENERAL PROCEDURES:** Observe all protection and safety precautions when cleaning up spills -- see Section 8. "EXPOSURE CONTROLS/PERSONAL PROTECTION".

**7. HANDLING AND STORAGE**

**GENERAL PROCEDURES:** Store in cool dry place, preferably in a locked storage area and avoid excess heat. Keep pesticide in original container.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**ENGINEERING CONTROLS:** Use this material only in well ventilated areas.

**PERSONAL PROTECTION**

**EYES AND FACE:** Wear chemical safety goggles to prevent eye contact during operations such as mixing or transfer or other activities when there is potential for eye contact.

**SKIN:** Although this product does not present a significant skin concern, minimize skin contamination by following good handling practices. Applicators and other handlers must wear: long sleeved shirt, long pants, and shoes with socks. Wash hands and contaminated skin thoroughly after handling.

**RESPIRATORY:** Avoid breathing vapor or mist. This product is not likely to pose an airborne exposure concern when handled and used in accordance with label instructions.

**OSHA HAZARDOUS COMPONENTS (29 CFR 1910.1200):**

Chemical Name	EXPOSURE LIMITS		
	OSHA PEL	ACGIH TLV	ACGIH STEL
Bifenthrin	None	None	None

**9. PHYSICAL AND CHEMICAL PROPERTIES**

**PHYSICAL STATE:** Liquid  
**APPEARANCE:** Clear to cloudy white liquid  
**pH:** ~7.0 to 7.3  
**SOLUBILITY IN WATER:** Miscible with water.  
**DENSITY:** 8.32 Lbs/gal at 20°C

**10. STABILITY AND REACTIVITY**

**STABLE:** YES  
**HAZARDOUS POLYMERIZATION:** NO  
**CONDITIONS TO AVOID:** Avoid contact with heat or open flame.

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## 1. TOXICOLOGICAL INFORMATION

### ACUTE

**EYES:** Rabbit - moderately irritating, irritation cleared by 48 hours.  
EPA FIFRA toxicity category - III.

**DERMAL LD<sub>50</sub>:** Rat =>10 g/kg. EPA FIFRA toxicity category - IV.

**SKIN IRRITATION:** Rabbit - nonirritating, contact with bifenthrin may produce reversible skin sensations such as numbness, burning and tingling. The skin sensations usually subside within 12 hours. EPA FIFRA toxicity category - IV.

**ORAL LD<sub>50</sub>:** Rat => 5 g/kg. EPA FIFRA toxicity Category - IV.

**INHALATION LC<sub>50</sub>:** Rat - 4 hour inhalation => 5.0 mg/liter.  
EPA FIFRA toxicity category - IV.

**SENSITIZATION:** Guinea pig - no evidence of allergic skin reactions.

### SUBCHRONIC:

**CARCINOGENICITY :** Mouse lifetime feeding study - high dose males - demonstrated an increase in urinary bladder hemangiopericytomas. There was no evidence of increased tumors in the other male or female mice dose levels. The mouse no observed effect level (NOEL) was male 75 mg/kg/dy, female 90 mg/kg/dy.

Rat lifetime feeding study - no findings of tumors. The rat NOEL was 10 mg/kg/dy. EPA classified bifenthrin - Group C carcinogen.

**NEUROTOXICITY:** Bifenthrin has not been associated with delayed peripheral neuropathy. Overexposure to pyrethroids results in a transient disruption in the depolarization of nerve membranes by interfering with the closing of the sodium channels. Depending upon the degree of overexposure, signs of overexposure may be displayed by tremors, muscle fasciculations, ataxia, spasms, hyperexcitability, hyperactivity and convulsions. Localized skin contact with bifenthrin may result in temporary burning, tingling or numbness sensations.

**TERATOGENICITY:** Bifenthrin is not considered to be a teratogen (a substance that causes birth defects). The rat and rabbit developmental NOELs were 1 and 8 mg/kg/dy, respectively.

**REPRODUCTIVE TOXIN:** Bifenthrin is not considered to cause adverse reproductive effects. Results of a rat multigeneration reproduction study indicated no developmental toxicity or reproductive effects at the highest dose level of approximately 15 mg/kg/dy. The maternal toxicity NOEL was approximately 5 mg/kg/dy.

**MUTAGENICITY:** The results of a series of mutation testing indicate that bifenthrin has a low order of mutagenic potential.

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## 12. ECOLOGICAL INFORMATION

**ENVIRONMENTAL DATA:** In soil, bifenthrin is stable over a wide pH range and degrades at a slow rate which is governed by soil characteristics. Bifenthrin will also persist in aquatic sediments. Bifenthrin has a high Log Pow (>6.0), a high affinity for organic matter, and is not mobile in soil. Therefore, there is little potential for movement into ground water. There is the potential for bifenthrin to bioconcentrate (BCF = 11,750).

**ECOTOXICOLOGICAL INFORMATION:** Bifenthrin is highly toxic to fish and aquatic arthropods and LC50 values range from 0.0038ug/L to 17.8 ug/L. In general, the aquatic arthropods are the most sensitive species. Care should be taken to avoid contamination of the aquatic environment. Bifenthrin had no effect on mollusks at its limit of water solubility. Bifenthrin is only slightly toxic to both waterfowl and upland game birds (LD50 values range from 1800 mg/kg to >2150 mg/kg).

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## 13. DISPOSAL CONSIDERATIONS

**FOR LARGE SPILLS:** Material collected that cannot be reprocessed should be disposed of in a landfill approved for pesticide disposal or in accordance with applicable Federal, state, or local procedures.

**PRODUCT DISPOSAL:** If necessary to dispose of partially filled product container, securely wrap it in several layers of newspaper and discard in trash.

**EMPTY CONTAINER:** Do not reuse container. Wrap empty container in several layers of newspaper and discard in trash.

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## 14. TRANSPORT INFORMATION

### DOT (DEPARTMENT OF TRANSPORTATION)

**PROPER SHIPPING NAME:** Not Regulated

**U.S. SURFACE FREIGHT CLASS:** Insecticides, Fungicides, Insect or animal repellents or vermin exterminators, NOI, Other than poison

**SPECIAL SHIPPING NOTES:** The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate Dangerous Goods

Regulations, for additional description requirements (e.g., technical name) and mode-specific or quantity-specific shipping requirements.

**5. REGULATORY INFORMATION**

**UNITED STATES**

**SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**

PRODUCT CLASSIFICATION UNDER SECTION 311 OF SARA				
ACUTE: NO	CHRONIC: YES	FIRE: NO	REACTIVITY: NO	PRESSURE GENERATING: NO

**STATE REGULATIONS**

No ingredients on list.

**16. OTHER INFORMATION**

**HMIS CODES**

**FIRE: 0 HEALTH: 0 REACTIVITY: 0 PROTECTION: -**

**NFPA CODES**

**FIRE: 0 HEALTH: 0 REACTIVITY: 0**

**APPROVAL DATE: 09/13/2002**

**REVISION SUMMARY Revision #: 1**

This MSDS replaces the May 16, 2001 MSDS. Any changes in information are as follows:

In Section 5

(Group Field) for Flash Point Flash Point (Operator) Flash Point °F (From) Flash Point Method

**COMMENTS:** Use of this product is regulated by the U.S. Environmental Protection Agency (EPA) through the approved product label. It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

**MANUFACTURER DISCLAIMER:** The information contained herein is, to the best of the Manufacturer's (see Section 1) knowledge and belief, accurate and reliable as of the date of preparation of this document. However, no warranty or guarantee, express or implied, is made as to the accuracy or reliability, and the Manufacturer shall not be liable for any loss or damage arising out of the use thereof. No authorization is given or implied to use any patented invention without a license. In addition, the Manufacturer shall not be liable for any damage or injury resulting from abnormal use, from any failure to adhere to recommended practices or from any hazards inherent in the nature of the product.