

# MATERIAL SAFETY DATA SHEET

DATE PREPARED: 07/26/1995

MSDS No: 1467

ORTHO® MALATHION 50 PLUS® Insect Spray

## 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** ORTHO® MALATHION 50 PLUS® Insect Spray**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.:** 239-739C **PN:** 1992-W

## 2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>Wt.%</u>	<u>CAS#</u>
Malathion	50	121-75-5
INERT INGREDIENTS	~50.0	

"Inert Ingredients" is a term defined by the U.S. Environmental Protection Agency under the Federal Insecticide, Fungicide, and Rodenticide Act (40 CFR 158.153). It refers to any substance, other than an active ingredient, which is intentionally added to a pesticide product. Some inert ingredients may be hazardous chemicals, as defined by the Federal OSHA Hazard Communication Standard (29 CFR 1910.1200). The hazards associated with these inert ingredients have been included in this document.

## 3. HAZARDS IDENTIFICATION

**EMERGENCY OVERVIEW****PHYSICAL APPEARANCE:** Light amber liquid

**IMMEDIATE CONCERNS:** - CAUSES SUBSTANTIAL BUT TEMPORARY EYE DAMAGE  
- HARMFUL IF SWALLOWED  
- AVOID CONTACT WITH SKIN OR CLOTHING  
- AVOID BREATHING VAPORS OR SPRAY MIST  
- FLAMMABLE  
- KEEP OUT OF REACH OF CHILDREN

## POTENTIAL HEALTH EFFECTS

**EYES:** The undiluted product is moderately irritating to the eyes. Eye contact may include discomfort, tearing, swelling, redness, and blurred vision. See Toxicological Information, section 11.

**SKIN:** This substance is a moderate skin irritant. Skin irritation may include discomfort, redness, swelling, and possibly blistering. If absorbed through the skin, this substance is considered practically non-toxic to internal organs. See Toxicological Information, section 11.

**INGESTION:** Depending upon the amount of product swallowed, this substance can produce signs and symptoms of systemic poisoning. In addition the product contains a petroleum solvent that can directly enter the lungs if it is swallowed (this is called aspiration). This can occur during the act of swallowing or when vomiting the substance. Once in the lungs, the petroleum solvent is very difficult to remove and can cause severe injury to the lungs and death. See Toxicological Information, section 11.

**INHALATION:** Prolonged or repeated inhalation exposure to the product vapor or spray mist may be harmful. See Toxicological Information, section 11.

**COMMENTS HEALTH:** Depending upon the extent and degree of overexposure to the product, signs and symptoms of cholinesterase inhibition can result following either ingestion, skin contact or inhalation routes of exposure. Signs and symptoms of cholinesterase inhibition can also result from either acute (one time), subchronic (repeated short-term) and chronic (daily life-time) overexposure to the product.

Signs and symptoms of cholinesterase inhibition usually occur within 12 hours following overexposure. These effects may include, but may not be limited to, headache, dizziness, weakness, nausea, vomiting, diarrhea, constriction of the pupil of the eye, blurred or dark vision, excessive salivation or nasal discharge, profuse sweating and abdominal cramps. Incontinence, unconsciousness, convulsions and breathing difficulties are indicative of severe poisoning. In untreated severe poisoning, death is due to respiratory failure or cardiac arrest.

This product also contains a petroleum distillate. Depending upon the degree of overexposure, the systemic toxicity of the product may be of less concern than the potential clinical complications that can result from aspiration of the petroleum distillate into the lungs if the product is either swallowed or vomited.

## 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.

**NOTES TO PHYSICIAN:** This material contains a cholinesterase inhibitor. Measurement of blood cholinesterase activity may be useful in monitoring exposure. If signs of cholinesterase inhibition appear, atropine sulfate is antidotal. 2-PAM (PROTOPAM) is also antidotal and may be used in conjunction with atropine but should not be used alone. Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid which can cause pneumonitis.

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## 5. FIRE FIGHTING MEASURES

**FLASHPOINT AND METHOD:** 106°F TAG CC

**EXTINGUISHING MEDIA:** CO<sub>2</sub>, Dry Chemical, Foam and Water Fog.

**HAZARDOUS COMBUSTION PRODUCTS:** Thermal decomposition may produce dimethylsulfide, sulfur dioxide, carbon monoxide, carbon dioxide, phosphorous-pentoxide and nitrogen oxides.

**FIRE FIGHTING PROCEDURES:** Liquid evaporates and forms vapor (fumes) which can catch fire and burn with explosive violence. Invisible vapor spreads easily and can be set on fire by many sources such as pilot lights, welding equipment, and electrical motors and switches. Fire hazard is greater as liquid temperature rises above 85 F.

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.

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## 6. ACCIDENTAL RELEASE MEASURES

**SMALL SPILL:** Soak up spilled material with paper towels or other absorbent material and discard in trash. Product is highly flammable. Keep all sources of ignition away from spill.

**LARGE SPILL:** Eliminate all sources of ignition in vicinity of spill or released vapor.

Liquid spills on floor or other impervious surfaces should be contained or diked, and should be absorbed with attapulgite, bentonite or other absorbent material. 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.

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## 7. HANDLING AND STORAGE

**GENERAL PROCEDURES:** Keep pesticide in original container. Do not put concentrate or dilute into food or drink containers. Store in a secure, preferably locked, storage area. Do not store diluted spray.

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## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**ENGINEERING CONTROLS:** No special ventilation is normally required. However, if operating conditions create airborne concentrations which exceed the recommended exposure standards (in Section 8), then special ventilation may be required.

**PERSONAL PROTECTION**

**EYES AND FACE:** Do not get this material in your eyes. Eye contact should be avoided by wearing chemical goggles or a face shield.

**SKIN:** Avoid contact with skin or clothing. Skin contact should be minimized by wearing protective clothing including chemical resistant gloves.

**RESPIRATORY:** Handling of the undiluted product is not likely to present an airborne exposure concern during normal handling. In the event of an accidental discharge of the material during manufacture or handling which produces a heavy vapor or mist, workers should put on respiratory protection equipment. Consult respirator manufacturer to determine appropriate type of equipment. Observe respirator use limitations specified by NIOSH MSHA or the manufacturer.

For application of product diluted in accordance with label instructions, no special respiratory protection is required.

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

<u>Chemical Name</u>	<u>EXPOSURE LIMITS</u>		
	<u>OSHA PEL</u>	<u>ACGIH TLV</u>	<u>ACGIH STEL</u>
Malathion	15 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>	None
Aromatic Hydrocarbon	100 ppm	100 ppm	150 ppm

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

**PHYSICAL STATE:** Liquid

**APPEARANCE:** Amber liquid with garlic-like odor

**PERCENT VOLATILE:** No Data Available

**SOLUBILITY IN WATER:** Miscible with water.

**DENSITY:** No Data Available

**SPECIFIC GRAVITY:** 1.040 to 1.055 gr/cc at 20°C

**VISCOSITY:** Same as water.

**COMMENTS:**

**pH:** 5.0 -8.0 (For a 1% Solution in 50/50 IPA/Water)

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## 10. STABILITY AND REACTIVITY

**STABLE:** YES

**HAZARDOUS POLYMERIZATION:** YES

**POLYMERIZATION:** May occur at temperatures above 100°C.

**HAZARDOUS DECOMPOSITION:** Thermal decomposition may produce dimethylsulfide, sulfur dioxide, carbon monoxide, carbon dioxide, phosphorous-pentoxide and nitrogen oxides.

**INCOMPATIBLE MATERIALS:** May react with strong bases or strong oxidizing agents, such as chlorates, nitrates, peroxides, etc.

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## 11. TOXICOLOGICAL INFORMATION

### ACUTE

**EYES:** The results of the rabbit eye studies indicate that, corneal involvement or irritation clearing in 8-21 days.

**DERMAL LD<sub>50</sub>:** The results of the rabbit skin irritation test indicate mild to moderate skin irritation. The Draize irritation score (range 0-8) was 3.8. The dermal LD50 in rabbits is greater than 2 g/kg.

**ORAL LD<sub>50</sub>:** The oral LD50 in male rats is 2.314 g/kg. The oral LD50 in female rats is 2.13 g/kg.

**INHALATION LC<sub>50</sub>:** The 4-hour inhalation LC50 in rats is greater than 5 mg/l for the product diluted at a ratio of 1 to 2.5.

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## 12. ECOLOGICAL INFORMATION

**ECOTOXICOLOGICAL INFORMATION:** This pesticide is toxic to fish, aquatic invertebrates, and aquatic life stages of amphibians. Do not apply directly to water. Drift and runoff may be hazardous to aquatic organisms in areas near the application site. Do not contaminate water when disposing of equipment washwaters. This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming

crops or weeds if bees are visiting the treatment area.

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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. Rinse thoroughly before discarding in trash.

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## 14. TRANSPORT INFORMATION

### DOT (DEPARTMENT OF TRANSPORTATION)

**PROPER SHIPPING NAME:** Not Regulated

**PRIMARY HAZARD CLASS/DIVISION:** None

**UN/NA NUMBER:** NONE

**PACKING GROUP:** No

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

### AIR (ICAO/IATA)

**PROPER SHIPPING NAME:** Consumer Commodity

**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.

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## 15. REGULATORY INFORMATION

### UNITED STATES

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

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

**313 REPORTABLE INGREDIENTS:** Malathion (CAS No. 121-75-5)

**TSCA (TOXIC SUBSTANCE CONTROL ACT)**

**TSCA REGULATORY:** All non FIFRA regulated components are on the US EPA's TSCA Inventory List.

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## 16. OTHER INFORMATION

**HMIS CODES**

**FIRE: 2 HEALTH: 2 REACTIVITY: 0 PROTECTION: -**

**NFPA CODES**

**FIRE: 3 HEALTH: 2 REACTIVITY: 0 SPECIAL: -**

**APPROVAL DATE:** 11/16/2000

**REVISION SUMMARY** Revision #: 1

This MSDS replaces the September 11, 1995 MSDS. Any changes in information are as follows:

In Section 4

Firstaid - Eyes Firstaid - Skin Firstaid - Ingestion Firstaid - Inhalation Additional Information

In Section 6

General Procedures

In Section 13

Product Disposal

In Section 16

Manufacturer Disclaimer Section 16 Footnotes

**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.