

MATERIAL SAFETY DATA SHEET

DATE PREPARED: 05/11/2001

MSDS No: 7102

ORTHO® Systemic Insect Killer Concentrate

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ORTHO® Systemic Insect Killer Concentrate

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.:239-2595C **PN:**5616

2. COMPOSITION / INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>Wt.%</u>	<u>CAS#</u>
Acephate	8	30560-19-1
Hexakis (Fenbutatin-Oxide), (2-methyl-2-phenypropyl) distannoxane	0.5	13356-08-6
INERT INGREDIENTS	~91.5	

"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 IRREVERSIBLE EYE DAMAGE

- CAUSES SKIN IRRITATION
- MAY BE HARMFUL IF SWALLOWED OR ABSORBED THROUGH THE SKIN
- DO NOT GET IN EYES, ON SKIN, OR ON CLOTHING
- FLAMMABLE
- KEEP OUT OF REACH OF CHILDREN

POTENTIAL HEALTH EFFECTS

EYES:This substance is a severe eye irritant and could cause permanent damage to your eyes and blindness. The degree of the injury will depend on the amount of material that gets into the eye and the speed and thoroughness of the first aid treatment. Symptoms of overexposure may include discomfort, irritation and redness, and blurred vision. See Toxicological Information, section 11.

SKIN:The undiluted product is considered a moderate skin irritant, therefore contact with the skin can cause prolonged (days) injury to the affected area. The degree of injury will depend on the amount of material that gets on the skin and the speed and thoroughness of the first aid treatment. Skin irritation may include redness, itching and swelling. This substance is considered slightly toxic to internal organs if absorbed through the skin. See Toxicological Information, section 11.

INGESTION:This substance is slightly toxic to internal organs if swallowed. This product contains a petroleum distillate. Because of the low viscosity of the petroleum distillate, it can directly enter or be aspirated into the lungs either during swallowing or vomiting the substance. Once in the lungs, the substance is very difficult to remove and can cause severe injury to the lungs and death. See Toxicology Information, section 11.

INHALATION:If inhaled, this substance is considered practically non-toxic to internal

organs.

TARGET ORGANS: Acephate is an inhibitor of the cholinesterase enzyme, found in nervous tissue, red blood cells, and plasma.

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: Ingestion of this product or subsequent vomiting can result in aspiration of light hydrocarbon liquid which can cause pneumonitis. 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.

5. FIRE FIGHTING MEASURES

FLASHPOINT AND METHOD: 60°F TAG CC

EXTINGUISHING MEDIA: CO₂, dry chemical, foam and water fog.

HAZARDOUS COMBUSTION PRODUCTS: Thermal decomposition products may be hazardous. These may include oxides of sulfur, nitrogen, phosphorous and tin compounds.

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 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.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Store away from heat or open flame. Keep pesticide in original container. Do not put concentrate or dilute into food or drink containers. Avoid contamination of feed, foodstuffs. Store in a cool dry place, preferably in a locked storage area. Do not store diluted spray. Store above freezing. Handle concentrate in a ventilated area. Keep container closed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Provide natural or mechanical ventilation to control exposure levels below airborne exposure limits (see below). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment. Consult NFPA Standard 91 for design of exhaust systems.

PERSONAL PROTECTION

EYES AND FACE: Where there is potential for eye contact, wear chemical goggles and have eye flushing equipment available.

SKIN: Wear appropriate protective clothing and chemical resistant gloves to prevent skin contact. Consult glove manufacturer to determine appropriate type of glove for given application. Wear face shield and chemical resistant clothing such as a rubber apron when splashing is likely. Wash contaminated skin promptly. Launder contaminated clothing and clean protective equipment before reuse. Wash thoroughly after handling.

RESPIRATORY: Avoid breathing vapor or mist. Use NIOSH/MSHA approved respiratory protection equipment (full facepiece recommended) when airborne exposure limits are exceeded (see below). If used, full facepiece replaces need for chemical goggles. Consult respirator manufacturer to determine appropriate type equipment for given application. Observe respirator use limitations specified by NIOSH/MSHA or the manufacturer. Respiratory protection programs must comply with 29 C.F.R. 1910.134.

For application of product 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>
Acephate	None	None	None
(2-methyl-2-phenylpropyl) distannoxane	0.1 mg/m ³	0.1 mg/m ³	0.3 mg/m ³
Isopropyl Alcohol	400 ppm	400 ppm	500 ppm
N-Methyl Pyrrolidone	None	None	None
Toximul 3406F			

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:Liquid

COLOR:Amber to yellow liquid

pH:6.2

SPECIFIC GRAVITY:0.8444 gr/cc at 20°C

COMMENTS:

WATER SOLUBILITY:Miscible in water

10. STABILITY AND REACTIVITY

STABLE:YES

HAZARDOUS POLYMERIZATION:NO

INCOMPATIBLE MATERIALS:May react with strong oxidizing agents, such as

chlorates, nitrates, peroxides, etc.

11. TOXICOLOGICAL INFORMATION

ACUTE

EYES: The results of the rabbit eye irritation study indicate that this product is severely irritating to eyes with all irritation clearing by day 21. EPA FIFRA toxicity category - I.

DERMAL LD₅₀: Practically non-toxic, (Rat LD50 >5000 mg/Kg). EPA FIFRA Toxicity Category - IV. Moderately irritating to skin (Rabbit). EPA FIFRA Toxicity Category - III.

ORAL LD₅₀: This product is slightly toxic if ingested. Rat LD50 = 2,749 mg/kg (male), 1,839 mg/kg (female). EPA FIFRA Toxicity Category - III.

INHALATION LC₅₀: 4 hour aerosol inhalation LC50 for rats : >5.1 mg/liter/hour. EPA FIFRA toxicity category - IV.

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

SUBCHRONIC: This product contains acephate, an organophosphate that is considered to be a cholinesterase inhibitor. Cholinesterase is an enzyme involved in the transmission of nerve impulses. Therefore, repeated daily exposure to the product can gradually lower the cholinesterase levels to a point that signs and symptoms of organophosphate poisoning may occur.

CHRONIC: Results of the rat chronic acephate feeding study indicate that the no observed effect level (NOEL) was 5 parts per million (ppm) or (0.25 mg/kg/dy). Hexakis NOEL's for the rat chronic and 2-year dog studies are 2,000 and 16,000 ppm (100 and 400 mg/kg/dy), respectively.

The dog 2-year acephate feeding study NOEL for cholinesterase inhibition was 30 ppm (0.75 mg/kg/dy). The effect level for cholinesterase inhibition occurred at the high dose of 200 ppm (5 mg/kg/dy).

CARCINOGENICITY:

CARCINOGENICITY COMMENTS:EPA has classed acephate in category C as a possible human carcinogen based on the liver tumor findings in the mouse lifetime feeding study. Liver pathology was observed at dose levels of 250 and 1000 ppm (37.5 and 150 mg/kg/dy), while an increased incidence of liver cancer was noted in the high dose (150 mg/kg/dy) female mice only. Acephate has not demonstrated any evidence of carcinogenic potential in any other species.

Hexakis was not carcinogenic in either the rat or mouse lifetime feeding studies or the 2 year dog chronic study.

NEUROTOXICITY:Based on the results of the chicken neurotoxicity studies, acephate has not demonstrated potential to cause delayed neuropathy. Hexakis has not been associated with neuro-histopathological changes.

TERATOGENICITY:Neither acephate, or hexakis have been demonstrated to cause birth defects.

REPRODUCTIVE TOXIN:When male and female rats were fed acephate continuously for two generations through weaning of the third generation, animals in the mid and high-dose groups demonstrated compound-related effects on reproductive performance. The low-dose was considered the no-effect-level. There was no evidence of adverse reproductive effects in the hexakis rat 3 generation study.

MUTAGENICITY:Acephate has demonstrated weak mutagenic potential in microbes or cultured cells, while results of in vivo studies indicate that it does not cause mutation in whole animals. Hexakis is not considered to be a mutagen in either in vitro or in vivo studies.

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL INFORMATION:This material is toxic to fish and birds. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not apply directly to water. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting treatment area.

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.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME:Consumer Commodity

PRIMARY HAZARD CLASS/DIVISION:ORM-D

UN/NA NUMBER:NONE

U.S. SURFACE FREIGHT CLASS:NMFC NBR. 102120

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.

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION

ACT)

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

313 REPORTABLE INGREDIENTS: Acephate. (CAS 30560-19-1); Hexakis (CAS 13356-08-6); N-methyl Pyrrolidone (CAS 872-50-4). De Minimis Concentrations for Section 313 of EPCRA is 1.0%.

TSCA (TOXIC SUBSTANCE CONTROL ACT)

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

STATE REGULATIONS

PROPOSITION 65 STATEMENT: No ingredients on list.

16. OTHER INFORMATION**HMIS CODES**

FIRE:3 HEALTH:3 REACTIVITY:0

NFPA CODES

FIRE:3 HEALTH:3 REACTIVITY:0

APPROVAL DATE: 05/11/2001

REVISION SUMMARY New MSDS

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