

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

COMPANY ADDRESS: MICRO FLO COMPANY
P.O. BOX 772099
MEMPHIS, TN 38117

EMERGENCY TELEPHONE NUMBERS:
(800) 424-9300 (CHEMTREC, transportation and spills)
(800) 900-4044 (Poison Control Center, human health)
(800) 345-4735 (ASPCA, animal health)

PRODUCT NAME(S) : ACEPHATE PRO PCO
CHEMICAL NAME : O,S-Dimethyl Acetylphosphoramidothioate
CHEMICAL FAMILY : Organophosphate
PRODUCT CODE : EPA Reg. No. 51036-237

SECTION 2 - COMPOSITION, INFORMATION OF INGREDIENTS

COMPONENT	PERCENTAGE	CAS NUMBER	OSHA PEL	ACIGH TLV
Acephate	96.0	30560-19-1	not listed	not listed

SECTION 3 - HAZARDS IDENTIFICATION SUMMARY

(As defined by OSHA Hazard Communication Standard, 29 CFR 1910.1200)

EMERGENCY OVERVIEW: Fine, white powder with rotten cabbage odor.

- Cholinesterase inhibitor, harmful if swallowed.
- Can cause moderate eye irritation.
- Avoid breathing dust or spray mist.
- Avoid contact with eyes, skin or clothing.
- Keep out of reach of children.

POTENTIAL HEALTH HAZARDS:

EYE - Contact may cause eye irritation. Degree of injury will depend on the amount of material that gets into eye and the speed and thoroughness of the first aid treatment.

SKIN - Prolonged or repeated skin contact may cause irritation. The systemic toxicity has not been determined.

INHALATION - Mist or dust concentrations may be harmful or irritating if inhaled. Signs and symptoms of respiratory tract irritation may include nasal discharge, sore throat, coughing, bronchitis, pulmonary edema and difficulty in breathing.

INGESTION - This material may be harmful if swallowed. Degree of injury will depend on amount ingested. Signs and symptoms which may occur within 12 hours following overexposure include headache, dizziness, weakness, pinpoint pupils, blurred vision, excessive salivation and nasal discharge, abdominal cramps, nausea and vomiting.

SECTION 4 - FIRST AID MEASURES

IF INHALED: Remove person from exposure area to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention.

IF ON SKIN: Remove contaminated clothing and wash skin with plenty of soap and water.

IF SWALLOWED: Drink 1 or 2 glasses of water or milk, and induce vomiting by touching the back of the throat with a finger. If possible, contact a physician, Poison Control, or an emergency center before inducing vomiting. Do not induce vomiting or give anything by mouth to an unconscious person. Take person and product container to the nearest emergency treatment center.

IF IN EYES: Wash eyes with fresh water for 15 minutes. If irritation continues, see a doctor.

NOTE TO PHYSICIAN: Emergency Information - 1-800-451-8461. Acephate is a cholinesterase inhibitor.

ANTIDOTE: If signs of cholinesterase inhibition appear, atropine is antidotal. 2-PAM may also be used in conjunction with atropine but should not be used alone. You may want to contact your supplier or a doctor to ensure that this information is up to date.

SECTION 5 - FIRE FIGHTING MEASURES

FLASHPOINT (method): Not applicable.

FLAMMABLE LIMITS (LFL-UFL): Not applicable.

FIRE AND EXPLOSION HAZARD: Material will not burn or explode under normal conditions. Dusts at sufficient concentrations could form explosive mixtures with air.

EXTINGUISHING MEDIA: Use foam, carbon dioxide, or water spray when fighting fires involving this material.

FIREFIGHTING INSTRUCTIONS: Evacuate area and fight fire from a safe distance. Minimize the amount of water used for fire fighting. Water runoff can cause environmental damage. Dike and collect water used to fight fire. Decontaminate personal protective equipment and fire fighting equipment before reuse.

FIREFIGHTING EQUIPMENT: Wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear (Bunker).

HAZARDOUS COMBUSTION PRODUCTS: Carbon dioxide, water vapor, oxides of sulfur, nitrogen and phosphorous.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Clean up spills immediately, observing precautions as described in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Vacuum or sweep up material and place in a properly labeled disposal container. Large spills may be neutralized with dilute solutions of soda ash or lime. After removal, flush contaminated area thoroughly with water. Do not allow any material to run off into soil, drainage systems, or bodies of water. Notify and consult with proper regulatory authorities.

SECTION 7 - HANDLING AND STORAGE

KEEP OUT OF REACH OF CHILDREN.

HANDLING: Use only in a well-ventilated area. Follow all MSDS/label precautions even after container is emptied because they may retain product residues.

STORAGE: Store in a cool, dry place in original container and protect from sunlight. Keep away from food and drinking water.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

ENGINEERING CONTROLS: Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

PERSONAL PROTECTIVE EQUIPMENT:

EYE PROTECTION - Safety glasses.

CLOTHING - Long-sleeved shirt and long pants, Shoes plus socks, Chemical-resistant headgear for overhead exposure.

GLOVES - Waterproof gloves.

RESPIRATOR - Dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C) when using in an area with inadequate ventilation.

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION: Fine, white powder.

ODOR: Rotten cabbage like.

MOLECULAR WEIGHT: 183.2

MOLECULAR FORMULA: C₄H₁₀NO₃PS

BOILING POINT: N/A

MELTING POINT: 195 F (90 C)

DENSITY: 25 - 30 pounds/ft³

pH: 4.2 (when diluted with water)

VAPOR PRESSURE: N/A

% VOLATILE: N/A

WATER SOLUBILITY: 750 g/L @ 20 C

SECTION 10 - STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable.

CONDITIONS TO AVOID: High temperatures and excess moisture.

INCOMPATIBILITY WITH OTHER MATERIALS: Alkaline materials.

HAZARDOUS DECOMPOSITION PRODUCTS: Noxious gases when exposed to alkaline materials.

Thermal decomposition may produce oxides of sulfur, nitrogen and phosphorous.

HAZARDOUS POLYMERIZATION: Product will not undergo polymerization.

SECTION 11 - TOXICOLOGICAL INFORMATION**ACUTE TOXICITY:**

Oral LD ₅₀ (rat, female)	-	1,030 mg/Kg
Dermal LD ₅₀ (rat)	-	> 10,000 mg/Kg
Inhalation LC ₅₀ (rat)	-	> 60 mg/L
Eye Irritation (rabbit)	-	Minimal irritation clearing within 24 hours
Skin Irritation (rabbit)	-	Minimal irritation
Sensitization (guinea pig)	-	Non-sensitizer.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Pre-existing cholinesterase depression.

CARCINOGEN STATUS:

OSHA - Not listed.

NTP - Not listed.

IARC - Not listed.

MUTAGENIC DATA: Weak evidence of mutagenicity in tests performed *in vitro* and mice.

ADDITIONAL DATA: Repeated or prolonged low level exposures to organophosphates may cause sensitization to subsequent exposures that mimic acute exposures.

SECTION 12 - ECOLOGICAL INFORMATION

ENVIRONMENTAL SUMMARY: This pesticide is toxic to birds. Do not apply directly to water, to areas where surface water is present. Cover or soil-incorporate spills. This product is highly toxic to bees exposed to direct treatment or residues 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.

FISH TOXICITY: (Technical)

96 hour LC₅₀, Rainbow trout - >1,000 ug/L

96 hour LC₅₀, Bluegill - >2,000 ug/L

AVIAN TOXICITY: (Technical)

Oral LD₅₀, Mallard duck - 350 mg/Kg

BEE TOXICITY: Highly toxic.

SECTION 13 - DISPOSAL CONSIDERATIONS

WASTE: Dispose of in accordance with applicable Federal, state and local laws and regulations.

CONTAINER: Completely empty bag into application equipment. Do not reuse container. Dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

SECTION 14 - TRANSPORT INFORMATION

DOT SHIPPING DESCRIPTION: Agricultural Insecticide, Solid, N.O.I.B.N.

DOT HAZARD CLASS: Not regulated

UN NUMBER: N/A

DOT PACKING GROUP: N/A

DOT PRIMARY/SUBSIDIARY LABEL: N/A

DOT PRIMARY/SUBSIDIARY PLACARD: N/A

DOT EMERGENCY RESPONSE GUIDE #: N/A

SECTION 15 - REGULATORY INFORMATION

FIFRA: All pesticides are governed under the Federal Insecticide, Fungicide, and Rodenticide Act. The regulatory information presented below is pertinent only when this product is handled outside of the normal use and application as a pesticide.

OSHA HAZARD COMMUNICATION STANDARD STATUS: Regulated

CERCLA REPORTABLE QUANTITY: N/A

SARA TITLE III STATUS:

302 Extremely Hazardous Substance - No

311/312 Hazard Categories - Immediate

313 Toxic Chemicals - Acephate

CALIFORNIA PROP 65 STATUS: Not listed

SECTION 16 - OTHER INFORMATION

DISCLAIMER: The information presented herein is based on available data from reliable sources and is correct to the best of Micro Flo's knowledge. Micro Flo makes no warranty, express or implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions. We disclaim all liability for injury or damage stemming from any improper use of the material or product described herein.

REVISED DATE: July 14, 1999

REVISED FOR: Addition of Poison Control Emergency Numbers

PREPARED BY: M. Gaskins

REVIEWED BY: S. McNeal

APPROVED BY: K. Branly