



Material Safety Data Sheet

ACE-jet Insecticide

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Product No. 20 Box 040-2011 10 Box Case 040-2020

Arborjet, Inc.
99 Blueberry Hill Rd
Woburn, MA 01801
In Case of Emergency, CHEM-TEL 1-800-255-3924
Product information: 1-781-935-9070

Section 1: Product Identification

Product Trade Name: ACE-jet
EPA Signal Word: Caution
Active Ingredient (% w/w): Acephate (97%)
Chemical Name: [O,S-DIMETHYL ACETYL-PHOSPHORAMIDOTHIOATE]
Chemical Class: Organophosphate Insecticide
EPA Registration Number: 74578-2
NOTE: ACE-jet is packaged in 15 gram packets. The contents in each package require the addition of water and mixing for use. Please refer to ACE-jet label.

Section 2: Composition/Information on Ingredients

Material:	CAS No.:	Percent:	Exposure Limits:
[O,S-DIMETHYL ACETYL-PHOSPHORAMIDOTHIOATE]*	30560-19-1	97.0%	None
Other**		3.0%	None

*Active Ingredient(s)

**Other ingredients are any substances other than an active ingredient contained in this product. Other ingredients are either non-hazardous or remain proprietary. Hazards that may be associated with other ingredients are addressed in this document.

Section 3: Hazards Identification

EMERGENCY OVERVIEW

CAUTION

- HARMFUL IF SWALLOWED
- AVOID CONTACT WITH EYES, SKIN OR CLOTHING
- AVOID BREATHING MIST OR VAPOR
- KEEP OUT OF REACH OF CHILDREN

Symptoms of Acute Exposure:

Eye: This substance is not expected to cause prolonged or significant eye irritation. The extent of the injury will depend upon the amount and duration of contact, and the speed and thoroughness of the first aid treatment. The expected adverse health effects resulting from an exposure may include redness and possibly some minor swelling.

Skin: This product is expected to cause brief and/or minor skin irritation. The extent of the injury will depend upon the amount and duration of contact, and the speed and thoroughness of the first aid treatment. The expected adverse health effects resulting from an exposure may include redness and possibly some minor swelling.

This product is not expected to cause allergic skin reactions.

Ingestion: This product has been shown to be slightly toxic when ingested. The extent of the injury will depend upon the amount and duration of contact, and the speed and thoroughness of the first aid treatment. The expected adverse systemic health effects are described below.

Inhalation: Based on an evaluation of the ingredients and/or similar products, this product is expected to be minimally toxic when inhaled. The extent of the injury will depend upon the amount and duration of contact, and the speed and thoroughness of the first aid treatment. The expected adverse systemic health effects are described below.

Symptoms of Chronic Exposure: High doses of the active ingredient have produced cancer in mice but there is no evidence that the active ingredient causes cancer in humans. EPA has classified the active ingredient as a Group C (possible) human carcinogen based on the cancer produced in female mice.

This product is not a listed carcinogen by the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), or the Occupational Safety and Health Administration (OSHA).

Teratology (Birth Defects) Information: There is no evidence that the active ingredient causes birth defects in humans.

Reproduction Information: There is no evidence that the active ingredient causes reproductive effects in humans.

Potentially Aggravated Condition: Individuals with preexisting medical conditions which lower cholinesterase levels may have increased susceptibility to cholinesterase depression.

Signs and Symptoms of Systemic Effects: This product contains a cholinesterase inhibitor. Signs and symptoms that may be seen, usually within several hours of exposure, include but are not limited to, headaches dizziness, weakness, constriction of the pupil, blurred or dark vision, excessive salivation or nasal discharge, profuse sweating, abdominal cramps, nausea, diarrhea and vomiting. Severe poisonings may result in incontinence, unconsciousness, convulsions and death.

Section 4: First Aid Measures

Eye Contact: Flush eyes immediately with fresh water for at least 15 minutes while holding the eyelids open. Remove contact lenses if worn. If irritation persists, see a doctor.

Skin Contact: If on skin, wash with soap and water thoroughly. Remove contaminated clothing and wash separately.

Ingestion: If swallowed, drink 1 or 2 glasses of water (or milk) and induce vomiting by touching the back of the throat with finger. If possible, contact a physician or Poison Control 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.

Inhalation: If inhaled, remove victim to fresh air. If not breathing, give artificial respiration preferably mouth-to-mouth.

Note 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.

Section 5: Fire Fighting Measures

Fire and Explosion:

Flash Point:	NA
Method:	NA
Auto ignition:	NA
Flammable Limits (% in air):	Lower: NA Upper: NA
Extinguishing Media:	CO ₂ , dry chemical, foam and water fog.

NFPA Ratings: Health 1; Flammability 1; Reactivity NA; Special None;

(Least-0, Slight-1, Moderate-2, High-3, Extrem-4) These values are obtained using professional judgment. Values were not available in the guidelines or published evaluations prepared by the national Fire Protection Association, NFPA.

Fire Fighting Instructions: 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.

Hazardous Combustion Products: Normal combustion forms carbon dioxide, water vapor, and may produce oxides of sulfur, nitrogen and phosphorus. Incomplete combustion can produce carbon monoxide.

Section 6: Accidental Release Measures

In Case of Spill or Leak: Control the spill or leak at the source. If mixed product is leaking from a pressurized device, shut off the pressure to slow the source of the leak. Contain the spill to prevent it from spreading, contaminating soil, or entering sewage, drainage systems, or any body of water. For liquid spills, cover entire spill with absorbent material, and place into appropriate disposal container. Scrub area with hard water detergent (Tide, Joy, Spic and Span), and pick up wash liquid with additional absorbent material and place into appropriate disposal container. Contaminated absorbent and wash water should be disposed of according to local, state and federal regulations. If spill or leak gets on clothing, please read and observe precautions in Section 8: Exposure Controls/Personal Protection.

Section 7: Handling and Storage

For commercial and/or farm applications:

User must read and observe all precautions on the product label.

Store the material in a well ventilated, secure area out of reach of children. Do not store food, beverages, or tobacco products in the material storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after

handling. Do not apply to food-bearing plants. Keep children and pets away from treatment area until dry. Read entire label before using. Use strictly in accordance with label precautionary statements and directions.

Section 8: Exposure Controls/Personal Protection

For commercial and/or farm applications:

User must read and observe all precautions on the product label.

Eye Protection: Do not get this material in your eyes. Eye contact can be avoided by wearing protective eyewear. Splash goggles are recommended. Applicators should have an eyewash bottle available while injecting. Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.

Skin Protection: Avoid prolonged or frequent skin contact with this material. Skin contact can be minimized by wearing protective clothing and gloves. Chemically resistant gloves should be worn at all times when handling this material. Wear chemical resistant gloves, such as polyethylene, butyl rubber, neoprene rubber or viton.

Respiratory Protection: No special respiratory protection is normally required. However, if operating conditions create airborne concentrations which exceed the recommended exposure standards the use of an approved respirator is required.

Ingestion Protection: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash hands with soap and water thoroughly after use to prevent possible ingestion of this product.

Section 9: Physical and Chemical Properties

Appearance:	White and Purple Pellets
Odor:	Strong cabbage-like odor
Solubility:	Soluble in water.
Melting Point:	NA
Boiling Point:	NA
Specific Gravity:	NA
Evaporation:	NA
Vapor Pressure:	1.7 X 10 ⁻⁶ mm Hg @ 24 oC
Molecular Weight:	183
Density:	1.35
pH:	NA

Section 10: Stability and Reactivity

Chemical Stability:	Product is stable at normal ambient temperature.
Conditions to Avoid:	None known.
Incompatibility (Materials to Avoid):	Contact with alkaline materials including hypochlorite oxidants may produce noxious gases.
Hazardous Decomposition Products:	Contact with alkaline materials including hypochlorite oxidants may produce noxious gases.
Hazardous Polymerization:	Polymerization will not occur.

Section 11: Toxicology Information

Acute: (Active Ingredient Specific Information)

This product contains an organophosphate, a cholinesterase inhibitor. Acute overexposure by oral, dermal or inhalation routes may produce signs and symptoms of toxicity, usually within several hours of exposure, including but are not limited to, headaches, dizziness, weakness, constriction of the pupil, blurred or dark vision, excessive salivation or nasal discharge, profuse sweating, abdominal cramps, nausea, diarrhea and vomiting. Severe poisonings may result in incontinence, unconsciousness, convulsions and death.

Eye Irritation: Minimal effects clearing within 24 hours. (Toxicity Category IV)

Skin Irritation: Slight and transient irritation was present at 72 hours after exposure. (Toxicity Category IV)

Dermal Toxicity: The dermal LD50 in rabbits is > 2 g/kg. (Toxicity Category III)

Oral Toxicity: The oral LD50 in male rats is 688 mg/kg. The oral LD50 in female rats is 1127 mg/kg. The LD50 for the combined sexes is 846 mg/kg. (Toxicity Category III)

Inhalation Toxicity: No active ingredient specific data is available.

Skin sensitization: No skin sensitization reaction in guinea pigs.

Sub-chronic Toxicity Studies: Dermal administration of active ingredient to rats, five days per week for three weeks, at doses up to 300 mg/kg/day produces statistically significant inhibition of cholinesterase activity in the brain of males and females treated with the highest dose (300 mg/kg/day) and in females at the mid-dose (60 mg/kg/day). The degree of inhibition was less than 15% in all cases and no clinical signs of toxicity were observed. The NOEL was 60 mg/kg/day for males and 12 mg/kg/day for females.

Chronic/Carcinogenicity: When mice were fed diets containing the active ingredient throughout their entire lifetime, increase in liver weight occurred, with liver carcinoma (a commonly occurring cancer in mice) and adenoma occurred in high-dose females. These observations did not occur in males at any dose, and low and mid-dose females. The increase in cancer found in high dose females was not significant. The only significant treatment-related effect was a decrease in cholinesterase activity of plasma, RBC, and brain.

Based on the increased incidence of liver carcinoma and adenoma in female mice, the EPA has classified the active ingredient of this material as a Group C (possible) human carcinogen.

The active ingredient is not listed as a carcinogen or suspected carcinogen by NTP, IARC, or OSHA.

Reproductive/Developmental Effects: In a developmental toxicity in rats active ingredient produced maternal toxicity at dosages of 20 mg/kg/day or higher. Developmental toxicity was observed in the 75 mg/kg/day dose group. The maternal NOEL was 5 mg/kg/day.

Section 12: Ecological Information

(Active Ingredient Specific Information)

Summary of Ecological Effects: The active ingredient in this product has been found to be moderately toxic to birds.

Avian Toxicity: Active ingredient is moderately toxic to birds.

Oral LD50 Mallard Duck:	350 mg/kg
Oral LD50 Pheasant:	140 mg/kg
Oral LD50 Chickens:	852 mg/kg

Aquatic Organism Toxicity: Active ingredient is practically non-toxic to freshwater fish. The 96-hour LC50 for the active ingredient was found to be higher than 1,000 ppm in rainbow trout, bluegill, and channel catfish.

Bluegill:	2050 ppm
Black Bass:	1725 ppm
Catfish:	2230 ppm
Mosquito:	6000 ppm
Goldfish:	9550 ppm
Crayfish:	750 ppm

Other Non-Target Organism Toxicity: NA

Section 13: Disposal Considerations

Applicators must dispose of any unused product as the label indicates.

Disposal Methods: Do not reuse original product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Section 14: Transport Information

DOT Shipping Name:	Insecticide, dry, non-regulated
Technical Shipping Name:	Acephate 97% powder
DOT Hazard Class:	NA
DOT Identification Number:	NA
Remarks:	NA

Section 15: Regulatory Information

Regulations Under FIFRA: All pesticides are governed under FIFRA (Federal Insecticide, Fungicide, and Rodenticide Act). Therefore, the regulations presented below are pertinent only when handled outside of the normal use and applications of pesticides. This includes waste streams, spills, misuse, or storage of large quantities of products containing hazardous or extremely hazardous substances.

Other U.S. Federal Regulations:

OSHA:	NA
CERCLA RQ:	NA
RCRA:	NA

SARA 311 CATEGORIES:

1. Immediate (Acute) Health Effects:	YES
2. Delayed (Chronic) Health Effects:	YES
3. Fire Hazard:	NO
4. Sudden Release of Pressure Hazard:	NO
5. Reactivity Hazard:	NA

This product is not listed as a carcinogen by the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), or the Occupational Safety and Health Administration (OSHA).

State Regulations: Some state standards may be more strict than the federal government, therefore users should consult state or local authorities since this section cannot provide a complete list of all state regulations.

Section 16: Other Information

For any non-emergency questions about this product call: 1-781-935-9070

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The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, either expressed or implied, is made with respect to the information contained herein.