

ACECAP® 97

SYSTEMIC INSECTICIDE IMPLANTS

Material Safety Data Sheet

CONTAINS TECHNICAL ACEPHATE

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Please read the entire document. This Material Safety Data Sheet contains important environmental, health, and toxicology information for your employees, and anyone who will use, transport, store, dispose of or handle this product. Please make sure this information is given to them. It also contains information to help you meet community right-to-know/emergency response reporting requirements under SARA Title III and many other laws. If you resell this product, this MSDS must be given to the buyer or the information contained herein must be incorporated in your MSDS. Changes have been made throughout this Material Safety Data Sheet.

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: ACECAP® 97 Systemic Insecticide Implants
PRODUCT NUMBER(S): NA
EPA REGISTRATION NUMBER: 37979-1
HEALTH CANADA REG. NO.: 21568

MANUFACTURER

*Creative Sales, Inc.
P.O. Box 501
222 No. Park Avenue
Fremont, Nebraska
U.S.A. 68025-0501*

EMERGENCY TELEPHONE NUMBERS

*HEALTH EMERGENCY OR SPILL
(800) 759-7739
(402) 727-4800*

PRODUCT INFORMATION: (402) 727-4800

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

PRODUCT NAME/CAS#	EXPOSURE LIMITS	CONC (%)
ORTHENE® Technical / 30560-19-1	NA	100.0

NDA – No Data Available NA – Not Applicable

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CONTAINING

INGREDIENT NAME/CAS #	EXPOSURE LIMITS	CONC (%)
ACEPHATE: O,S-DIMETHYL ACETYLPHOSPHORAMIDOTHIOATE CAS30560191	1mg/m ³ Chevron TLV	> 97.0%
MANUFACTURING IMPURITIES	NA	< 3.0%

All of these manufacturing impurities are present at less than 1% and are not known human carcinogens, or are not known to be hazardous.

TLV - Threshold Limit Value
STEL - Short-term Exposure Limit

TWA - Time Weighted Average
CAS - Chemical Abstract Service Number

SECTION 3: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

CAUTION:

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

POTENTIAL HEALTH EFFECTS

Acute Toxicity

Eye: This substance is not expected to cause prolonged or significant eye irritation.

Skin: This substance is not expected to cause prolonged or significant skin irritation. If absorbed through the skin, this substance is considered practically non-toxic to internal organs.

Ingestion: This substance is slightly toxic to internal organs if swallowed. The degree of injury will depend on the amount absorbed from the gut. Signs and symptoms which may be seen usually within 12 hours following overexposure, may include, but not be limited to, headache, dizziness, weakness, constriction of the pupil of the eye, blurred or dark vision, excessive salivation or nasal discharge, profuse sweating, abdominal cramps, nausea, and vomiting. Incontinence, unconsciousness, and convulsions indicate severe poisoning. In untreated severe poisoning, respiratory depression or cardiac arrest may be fatal.

Inhalation: If inhaled, this substance is considered practically non-toxic to internal organs. This substance may be irritating if inhaled. Signs and symptoms of respiratory tract

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irritations may include, but may not be limited to, one or more of the following: nasal discharge, sore throat, coughing, bronchitis, pulmonary edema and difficulting in breathing.

Chronic Toxicity (Including Cancer): High doses of Acephate have produced cancer in mice but there is no evidence that Acephate causes cancer in humans.

Teratology (Birth Defects) Information: There is no evidence that Acephate causes birth defects.

Reproduction Information: There is no evidence that Acephate causes reproductive effects in humans.

For complete discussion of the toxicology data from which this evaluation was made, refer to Section 11.

SECTION 4: FIRST AID MEASURES

EMERGENCY NUMBER (800) 892-0099

EYES: Flush eyes immediately with fresh water for at least 15 minutes while holding the eyelids open. Remove contact lenses if worn. No additional first aid should be necessary. However, if irritation persists, see a doctor.

SKIN: If on skin, remove contaminated clothing, wash skin with plenty of soap and water. Wash contaminated clothing before reuse.

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, Poison Control Center, or 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.

INHALATION: If inhaled: Move victim to fresh air. If not breathing, give artificial respiration, preferably mouth to mouth. Get medical attention.

NOTES TO PHYSICIAN: This material contains a cholinesterase inhibitor. Measurement of blood cholinesterase activity may be useful in monitoring exposure but decisions regarding treatment will usually need to be made before test results are available. 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

FLASH POINT: NA **METHOD:** NA

AUTOIGNITION: NDA

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

FLAMMABLE LIMITS (% by volume in air): Lower: NDA Upper: NDA

NFPA RATINGS: Health 1; Flammability 1; Reactivity NDA; Special NDA

(Least-0, Slight-1, Moderate-2, High-3, Extreme-4). These values are obtained using the guidelines or published evaluations prepared by the National Fire Protection Association, NFPA

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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 product oxides of sulfur, nitrogen and phosphorous. Incomplete combustion can produce carbon monoxide.

SECTION 6: ACCIDENTAL RELEASE MEASURES

SPILL OR LEAK PRECAUTIONS: Do not discharge into lakes, streams, ponds or public waters unless in accordance with an NPDES permit. Do not apply directly to water or wetlands. Do not contaminate water by cleaning of equipment or disposal of waste.

Clean up spills immediately, observing precautions in Personal Protection Section 8. Vacuum with machines equipped with high efficiency filters or sweep up material and place in a disposable container. Scrub contaminated area with detergent and water using a stiff broom. Pick up liquid with Oil Dry, cat litter, clay, rags or other absorbent and place in a disposable container.

DISPOSAL METHODS: Refer to Section 13, Disposal Considerations.

SECTION 7: HANDLING AND STORAGE

READ AND OBSERVE ALL PRECAUTIONS ON PRODUCT LABEL.

Keep pesticide in original container.
Store in a cool, dry place. Protect from excessive heat.

Do not contaminate food or foodstuffs.
Do not store or transport near feed or food.

SECTION 8: EXPOSURE CONTROLS; PERSONAL PROTECTION

EYE PROTECTION:

User: Do not get this material in your eyes. Eye contact can be avoided by wearing chemical goggles

Emergency
Responder: NDA

RESPIRATORY/VENTILATION REQUIREMENTS:

User: 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.

Use adequate ventilation to keep the airborne concentrations of this material below the recommended exposure standard.

Emergency
Responder: NDA

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SKIN PROTECTION:

User: No special skin protection is usually necessary. Avoid prolonged or frequently repeated skin contact with this material. Skin contact can be minimized by wearing protective clothing.

Emergency Responder: NDA

EXPOSURE LIMITS: See Section 2.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	White powder with a strong cabbage-like odor.
MELTING POINT:	86.9 – 91.0°C (Decomposes)
BOILING POINT:	NA
DENSITY/BULK DENSITY/ SPECIFIC GRAVITY:	1.35
SOLUBILITY:	Soluble in water; moderately soluble in alcohol and acetone; slight-moderate solubility in aromatic solvents.
VAPOR PRESSURE:	1.7X10 – 6 mm Hg @ 24°C
DISSOCIATION CONSTANT:	NDA
OCTANOL/WATER PARTITION COEFFICIENT:	NDA
pH:	NDA
VISCOSITY:	NDA
MISCIBILITY:	NDA
CORROSION CHARACTERISTICS:	NDA

SECTION 10: STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable at temperatures below 122°F (50°C).

INCOMPATIBILITY: Avoid contact with alkaline materials.

HAZARDOUS DECOMPOSITION PRODUCTS: Contact with alkaline materials including hypochlorite oxidants, may product noxious gases.

HAZARDOUS POLYMERIZATION: Polymerization will not occur.

IMPACT EXPLODABILITY: NDA

OXIDATION/REDUCTION PROPERTIES: NDA

SECTION 11: TOXICOLOGY INFORMATION

ACUTE (Product Specific Information)

Eye Irritation: Minimal effects clearing within 24 hours.

Skin Irritation: No irritation was present 72 hours after exposure.

Dermal Toxicity: The dermal LD₅₀ in rabbits is > 10 g/kg.

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Oral Toxicity: The oral LD₅₀ in male rates is 1447 mg/kg. The oral LD₅₀ in female rates is 1030 mg/kg

Inhalation Toxicity: The 4-hour LC₅₀ in rates is > 61.7 mg/l.

Skin Sensitization: Acephate did not induce a positive skin sensitization reaction in the guinea pig using the Modified Buehler or the Maximization techniques.

SUBCHRONIC: The most significant treatment related effect of Acephate is a decrease in cholinesterase activity of plasma, RBC, and brain.

CHRONIC/CARCINOGENICITY: When mice were fed diets containing Acephate throughout their entire lifetime, a compound-related increase in liver weight, together with liver carcinoma (a commonly occurring cancer in mice) occurred in high-dose females. These changes were not observed in the males at any dose level or in low- or mid-dose females. When rates were fed diets containing Acephate throughout their entire lifetime, there was no treatment-related increase in tumors at any site. The most significant treatment-related effect was a decrease in cholinesterase activity of plasma, RBC, and brain.

TERATOLOGY/DEVELOPMENTAL TOXICITY: There is no evidence that Acephate causes birth defects.

REPRODUCTION: 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 judged to be a no-effect level.

MUTAGENICITY: Acephate has been shown to have a weak potential to cause mutations when tested in microbes or cultured cells and in some studies using mice. However, the results of most live animal studies indicate that Acephate does not cause mutations in whole animals.

OTHER: The significance of the above-mentioned results cannot be fully evaluated for humans. However, based on the dose-response observed in these studies and risk evaluation of the results, it is concluded that the risk of developing cancer or other adverse health effects is minimal if one follows the precautions outlined on the product label, material safety data sheet and any plant safety instructions.

SECTION 12: ECOLOGICAL INFORMATION

AVIAN TOXICITY: Acephate is moderately toxic to birds.

Oral LD₅₀ Mallard Duck: 350 mg/kg

Oral LD₅₀ Pheasant: 140 mg/kg

Oral LD₅₀ Chickens: 852 mg/kg

In addition, Acephate in the diet causes adverse effects on reproduction in mallard ducks (no effect level greater than 5 ppm, but less than 20 ppm) and in bobwhite quail (no-effect level greater than 20 ppm, but less than 80 ppm).

AQUATIC ORGANISM TOXICITY: Acephate is practically non-toxic to freshwater fish. The 96-hour LC₅₀ for Orthene Technical was found to be higher than 1,000 ppm in rainbow trout, bluegill, and channel catfish. The following LC₅₀ values for Orthene 75 S Soluble Powder substantiate the low toxicity to fish:

Bluegill: 2,050 ppm

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Black Bass: 1,725 ppm
 Catfish: 2,230 ppm
 Mosquito Fish: 6,000 ppm
 Goldfish: 9,550 ppm
 Crayfish: 750 ppm

OTHER NON-TARGET ORGANISM TOXICITY: Acephate is highly toxic to bees. The acute oral LD₅₀ for bees is 1.2 ug/bee.

SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL METHODS: Check governmental regulations and local authorities for approved disposal of this material.

Dispose in accordance with applicable laws and regulations.

SECTION 14: TRANSPORT INFORMATION

D.O.T. SHIPPING NAME: Organophosphorus Pesticides, Solid, (Acephate), NOI, Other Than Poison

TECHNICAL SHIPPING NAME: NDA

D.O.T. HAZARD CLASS: Not hazardous

U.N./N.A. NUMBER: Does not apply

PRODUCT RQ (lbs): NONE

D.O.T. LABEL: NDA

D.O.T. PLACARD: NONE

FREIGHT CLASS BULK: NDA

IATA CATEGORY: NDA

SECTION 15: REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

OSHA Status: NONE

TSCA Status: NONE

CERCLA Reportable Quantity: NONE

SARA Title III Status:

SARA 311 CATEGORIES:	1.	Immediate (Acute) Health Effects: YES
	2.	Delayed (Chronic) Health Effect: YES
	3.	Fire Hazard; NO
	4.	Sudden Release of Pressure Hazard; NO
	5.	Reactivity Hazard; NDA

RCRA Status: NONE

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STATE REGULATIONS:

NONE

SECTION 16: OTHER INFORMATION

REASON FOR ISSUE: MSDS system was updated and responsibility for preparation and maintenance was transferred to Valent.

INFORMATION PROVIDED BY: VALENT CORP. / TOMEN AGRO

APPROVAL DATE: 6/1/97

SUPERSEDES DATE: NONE

MSDS NUMBER: 0007 Replaces MSDS dated: 6/30/94

The information in this MSDS is based on data available to us as of the revision date given herein, and believed to be correct.

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Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910,1200) by

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