

SECTION 1: Product and Company Identification

1.1. Product identifier

Trade name : Lepitect Systemic Tree & Ornamental Insecticide
Product code : EPA Reg. No. 74779-6

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Use of the substance/preparation : Insecticide

1.2.2. Uses advised against

No data available

1.3. Details of the supplier of the safety data sheet

Rainbow Treecare Scientific Advancements
11571 K-Tel Drive
Minnetonka, MN 55343
Phone: 1-(877) 272-6747 (toll free)
www.treecarescience.com

1.4. Emergency telephone number

Emergency number : (800)-424-9300 (CHEMTREC)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification

Classification of LEPITECT:

Physical hazards	Not classified.	
Health hazards	Acute toxicity, oral	Category 4
Environmental hazards	Hazardous to the aquatic environment, acute hazard	Category 2
	Hazardous to the aquatic environment, long-term hazard	Category 2
OSHA defined hazards	Not classified.	

2.2. Label elements

GHS Labeling Elements

Hazard pictograms (CLP) : 

Signal word : WARNING

Hazard statements : Causes eye irritation. Harmful if swallowed. Toxic to aquatic life. Toxic to aquatic life with long-lasting effects.

Precautionary statements (prevention) : Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid breathing dust or spray mist. Avoid release to the



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GHS Labeling Elements

- environment.
- Precautionary statements (response) : If swallowed: Call a poison control center/doctor if you feel unwell. Rinse mouth. Collect spillage.
- Precautionary statements (storage) : Store away from incompatible materials.
- Precautionary statements (disposal) : Dispose of contents/container in accordance with federal, state and local regulations.

SECTION 3: Composition/information on ingredients

Name	CAS number	%/wt.
Acephate (O,S-Dimethylacetylphosphoramidothioate)	30560-19-1	97.4
Other Ingredients*	NA	2.6

*Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

SECTION 4: First aid measures

4.1. Description of first aid measures

- IF INHALED** : Move to fresh air. Call a physician if symptoms develop or persist. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.
- IF ON SKIN OR CLOTHING** : Wash off with soap and water. Get medical attention if irritation develops and persists. Take off contaminated clothing and wash before reuse.
- IF IN EYES** : Flush eyes immediately with large amounts of water. Remove contact lenses, if present and easy to do. Call poison control center or doctor for treatment advice if irritation develops and persists.
- IF SWALLOWED** : If victim is conscious, administer an 8 oz. glass of water containing 2 tbsp. activated charcoal. Have person lie on their left side to slow down absorption of the ingested material. Never give anything by mouth to a victim who is unconscious or is having convulsions. Get medical advice/attention if you feel unwell. Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Do not use mouth-to-mouth method if victim ingested the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

Most important symptoms/effects, acute and delayed:

This product is a Cholinesterase Inhibitor. Preexisting skin or respiratory disorders may be aggravated by exposure to components of this product. Preexisting conditions which lower cholinesterase levels increase vulnerability to cholinesterase depression. these include: (for plasma) chronic alcoholism; malnutrition; dermatomyositis; existing toxicity from exposure to carbon disulfide; benzalkonium salts, organic mercury compounds, ciguatoxins or solanines; and (for RBC) hemolytic anemia. Acute cholinesterase depression may be evidenced by headache, nausea, vomiting, diarrhea, abdominal cramps, excessive sweating, salivation and tearing, constricted pupils, blurred vision, tightness in chest, weakness, muscle twitching and confusion; in extreme cases, unconsciousness, convulsions, severe respiratory depression and death may occur. Product may cause slight but temporary irritation to the eyes and may cause irritation of the skin. Direct contact with eyes may cause temporary irritation.

Indication of immediate medical attention and special treatment needed:

This product is an Organophosphate (OP) Insecticide. Do not handle the patient without the following protective equipment in place: chemical resistant gloves and apron (preferably nitrile). Remove contaminated clothing and do not reuse without thorough cleaning with detergent and hot water. Dispose of heavily contaminated clothing, including shoes, as a hazardous waste. Do not wait for laboratory confirmation to treat patients with strong clinical evidence of poisoning. In the USA and other countries, contact your local or national poison control center for more information. Establish airway and oxygenation. IV Atropine sulfate is the antidote of choice against parasympathetic nervous stimulation. If there are signs of parasympathetic stimulation, Atropine Sulfate should be injected at 10 minutes intervals in doses of 1 to 2 milligrams until complete atropinization has occurred. Pralidoxime chloride (2-PAM chloride) may also be used as an effective antidote in addition to and while maintaining full atropinization. In adults, an initial dose of 1 gram of 2-PAM should be injected, preferably as an infusion, in 250 cc of saline over a 15 to 20 minute period. If this is not practical, 2-PAM may be administered slowly by intravenous injection as a 5% solution in water over not less than 2 minutes. After about an hour, a second dose of 1 gram of 2-PAM will be indicated if muscle weakness has not been relieved. For infants and children, the dose of 2-PAM is 0.25 grams. Avoid morphine, aminophylline, phenothiazine, reserpine, furosemide and ethacrynic acid. Clear chest by postural drainage. Oxygen administration may be necessary. Observe patient continuously for 48 hours. Repeated exposure to cholinesterase inhibitors may without warning cause prolonged susceptibility very small doses of any cholinesterase inhibitor. Allow no further exposure until time for cholinesterase regeneration has been attained as determined by a blood test. Bathe and shampoo contaminated skin and hair. If ingested, empty stomach; activated charcoal is useful to further to further limit absorption. If victim is alert, Syrup of Ipecac (2 tablespoons in adults, 1 tablespoon in small children) is indicated. If symptoms such as loss of gag reflex, convulsions, or unconsciousness occur before emesis, gastric lavage should be considered following intubation with a cuffed indotracheal tube. Keep victim under observation. Keep victim warm. Symptoms may be delayed.

General Information:

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. This product is a Cholinesterase Inhibitor. A physician should be contacted in all cases of exposure to the technical and its formulations.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water fog. Foam. Dry chemical powder. Carbon dioxide (CO₂).
Unsuitable extinguishing media : Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards : During fire, gases hazardous to health may be formed.
General fire hazards : No unusual fire or explosion hazard noted.

5.3. Advice for firefighters

Firefighting instructions : Use water spray to cool unopened containers.
Use standard firefighting procedures and consider the hazards of other involved materials.
No unusual fire or explosion hazards noted.

Firefighting equipment : Full protective equipment with self-contained breathing apparatus with full facepiece.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of this SDS.

6.2. Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground. Inform appropriate managerial or supervisory personnel of all environmental releases.

6.3. Methods and material for containment and cleaning up

Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewer, basements or confined areas. Shovel up, sweep up or vacuum up the material and place in a container for salvage or disposal. Clean surface thoroughly to remove residual contamination. Decontaminate the area and equipment with dilute alkali or ammonia (less than 5%) and detergent.

Never return spills to original containers for re-use. For waste disposal, see section 13 of this SDS.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : KEEP OUT OF REACH OF CHILDREN!
Use only in a well-ventilated area. Minimize dust generation and accumulation.
Wear appropriate personal protective equipment. Do not taste or swallow. When using, do not eat, drink or smoke. Provide adequate ventilation. Wash hands thoroughly after handling. Avoid release to the environment. Observe good industrial hygiene practices.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Keep away from food, drink and animal feeding stuffs.
Store in a cool, dry place, out of direct sunlight.

SECTION 8: Exposure controls/personal protection

8.1. Personal protective equipment

Occupation exposure limits: No exposure limits noted for ingredient(s).

Biological limit values: No biological exposure limits noted for the ingredient(s).

Eye/Face Protection: If contact is likely, safety glasses with side shields are recommended.

Skin Protection: Wear appropriate chemical resistant gloves. Nitrile gloves are recommended. Wear suitable protective clothing. Long-sleeved shirt and long pants or coveralls, socks and closed toe shoes are required.

Respiratory Protection: If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

Thermal hazards: Wear appropriate thermal protective clothing, when necessary.

General Hygiene Considerations: Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

8.2. Exposure controls

Appropriate engineering controls: Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	: White pellet
Physical state	: Solid
Odor	: Strong cabbage-like odor
Odor threshold	: No data available
pH (1%)	: No data available
Melting/freezing point	: 179.6 °F (82 °C) estimated
Initial boiling point/boiling range	: No data available
Flash point	: No data available
Evaporation rate	: No data available
Flammability (solid, gas)	: No data available
Upper/lower flammability or explosive limits	: No data available
Vapor pressure	: 1.70E-06 mm Hg estimated
Vapor density	: No data available
Relative density	: No data available
Bulk density	: 27 lb/ft ³
Solubility	: Soluble in water
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Material is stable under normal conditions.



10.3. Possibility of hazardous reactions

Hazardous polymerization does not occur.

10.4. Conditions to avoid

Strong oxidizing agents and alkaline compounds.

10.5. Incompatible materials

Strong oxidizing agents

10.6. Hazardous decomposition products

Emits hazardous fumes and smoke of unknown composition when heated to decomposition or burned. Normal combustions forms carbon dioxide, water vapor and may produce oxides of sulfur, nitrogen and phosphorous. Incomplete combustion can produce carbon monoxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Based on an evaluation of the ingredients and/or similar products.

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	No adverse effects due to inhalation are expected.
Eye contact	Direct contact with eyes may cause temporary irritation.
Ingestion	Harmful if swallowed.

Symptoms related to the physical, chemical and toxicological characteristics

Direct contact with eyes may cause temporary irritation.

Information on toxicological effects

Acute toxicity Harmful if swallowed

ACUTE TOXICITY DATA			
Dermal	LD ₅₀ rabbit	>2000 mg/kg	Tox. Category III
Inhalation	LC ₅₀ rat (4h)	>61.7 mg/L	Tox. Category IV
Oral	LC ₅₀ rat	688 mg/kg	Tox. Category III

Skin corrosion/irritation (similar product)	: Prolonged skin contact may cause temporary irritation (slight irritant; Tox Cat IV).
Eye damage/irritation (similar product)	: Direct contact with eyes may cause temporary irritation (slight irritant; Tox Cat IV)
Respiratory sensitization	: Not a respiratory sensitizer.
Skin sensitization (Acephate Technical)	: Non-sensitizer (guinea pig). This product is not expected to cause skin sensitization.
Germ cell mutagenicity	: No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)	: Not listed



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Reproductive toxicity	: This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity – single exposure	: Not classified
Specific target organ toxicity – repeated exposure	: Not classified
Aspiration hazard	: Not an aspiration hazard

SECTION 12: Ecological information

12.1. Toxicity

Ecotoxicity – Toxic to aquatic life with long-lasting effects.

Ecotoxicity data

Ecotoxicity data are not available for LEPITECT. Active ingredient data are given below:

Acephate	
Crustacea – EC ₅₀ Water flea (<i>Daphnia magna</i>)	>50 mg/l (48 hours)
Fish – LC ₅₀ Rainbow trout, Donaldson trout	2.36 – 3 mg/l (96 hours)

12.2. Persistence and degradability

No data is available on the degradability of this product.

12.3. Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Acephate (O,S-Dimethylacetylphosphoramidothioate) -0.85

12.4. Mobility in soil

No data available.

12.5. Other adverse effects

No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal instructions: Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

Local disposal regulations: Dispose in accordance with all applicable regulations.

Hazardous waste code: The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

Waste from residues / unused products: Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

Contaminated packaging: Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

SECTION 14: Transport information

DOT

UN-No. : UN3077
 Proper Shipping Name : Environmentally hazardous substances, solid, n.o.s. (Acephate (O,S-Dimethylacetylphosphoramidothioate))
 Transport hazard class(es)
 Class : 9
 Subsidiary risk : -
 Hazard labels : 9
 Packing group : III
 Special precautions for user : Read safety instructions, SDS and emergency procedures before handling.
 Special provisions : 8, 146, 335, A112, B54, IB8, IP3, N20, T1, TP33
 Packaging exceptions : 155
 Packaging non bulk : 213
 Packaging bulk : 240

IATA

UN-No. : UN3077
 Proper Shipping Name : Environmentally hazardous substances, solid, n.o.s. (Acephate (O,S-Dimethylacetylphosphoramidothioate))
 Transport hazard class(es)
 Class : 9
 Subsidiary risk : -
 Packing group : III
 Environmental hazards : Yes
 ERG Code : 9L
 Special precautions for user : Read safety instructions, SDS and emergency procedures before handling.
 Other information
 Passenger and cargo aircraft : Allowed
 Cargo aircraft only : Allowed

IMDG

UN-No. : UN3077
 Proper Shipping Name : ENVIRONMENTALLY HAZARDOUS SUBSTANCES, SOLID, N.O.S. (Acephate (O,S-Dimethylacetylphosphoramidothioate))
 Transport hazard class(es)
 Class : 9
 Subsidiary risk : -
 Packing group : III
 Environmental hazards
 Marine Pollutant : Yes
 EmS : F-A, S-F
 Special precautions for user : Read safety instructions, SDS and emergency procedures before handling.
 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not applicable

DOT; IATA; IMDG



Marine Pollutant



General Information : IMDG Regulated Marine Pollutant

SECTION 15: Regulatory information

FIFRA Information:

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Signal word : CAUTION
Hazard statements : Harmful if swallowed.
Precautionary statements : HAZARDS TO HUMANS AND DOMESTIC ANIMALS
Keep out of reach of children.

U.S. Federal Regulations:

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. This product is registered under EPA/FIFRA Regulations. It is a violation of Federal Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions.

TSCA Section 12(b) Export Notification : Not regulated

CERCLA Hazardous Substance List (40 CFR 302.4) : Not listed

SARA 304 Emergency Release Notification : Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050) : Not listed

SARA Hazard Categories

Immediate Hazard : Yes
Delayed Hazard : No
Fire Hazard : No
Pressure Hazard : No
Reactivity Hazard : No

SARA 302 Extremely hazardous substance : Not listed

SARA 311/312 Hazardous chemical : No



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SARA 313 (TRI reporting) : Acephate

Chemical Name	CAS Number	%/wt
Acephate (O,S-Dimethylacetylphosphoramidothioate)	30560-19-1	97.4

SECTION 16: Other information

National Fire Protection Rating (NFPA)

HEALTH	2
FLAMMABILITY	0
INSTABILITY	0
4 = Severe 3 = Serious 2 = Moderate 1 = Slight 0 = Minimal	

HMIS Ratings

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0
4 = Severe 3 = Serious 2 = Moderate 1 = Slight 0 = Minimal	

MSDS US

Disclaimer: The information provided by Rainbow Treecare Scientific Advancements, contained herein is given in good faith and correct to the best of our knowledge. However, the information given is designed only as guidance for safe handling, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification.

REVISED: May 2015

REASON: GHS Compliance