

MATERIAL SAFETY DATA SHEET



Nagarjuna Agrichem Limited

Emergency Phone: 040 33605264

Plot No.12-A, 'C' Block, Lakshmi Towers,
Nagarjuna Hills, Punjagutta, Hyderabad- 500082.
Andhra Pradesh, INDIA

ACEPHATE TECHNICAL

MSDS No.: NACL T 3000

1. Product and Company Identification

Product Name : Acephate Technical
Chemical Name : O,S-dimethyl acetylphosphoramidothioate
Chemical Class : Organo phosphorus Insecticide
Molecular formula : C₄H₁₀NO₃PS

2. Composition / Information on ingredients

Chemical Name	CAS#	Percent or content (w/w)
Acephate a.i.	30560-19-1	98.50 %
Other ingredients	-	1.50 %

3. Health Hazards Identification

Emergency Overview:

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

Potential Health Hazards

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.

MATERIAL SAFETY DATA SHEET



Nagarjuna Agrichem Limited

Emergency Phone: 040 33605264

Plot No.12-A, 'C' Block, Lakshmi Towers,
Nagarjuna Hills, Punjagutta, Hyderabad- 500082.
Andhra Pradesh, INDIA

ACEPHATE TECHNICAL

MSDS No.: NACL T 3000

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

4. First Aid Measures

- Eyes** Hold eye open and rinse slowly and rinse gently with fresh water for 15 - 20 minutes. If irritation persists, consult a medical physician.
- Skin** Prolonged or repeated skin contact may cause irritation. The systemic toxicity has not been determined.
- Ingestion** 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 the person and product container to the nearest emergency treatment center.
- Inhalation** Remove person from exposure area to fresh air. If not breathing give artificial respiration, preferably mouth to mouth. Get medical attention.

5. Fire Fighting Measures

- Fire** Not expected to be a fire hazard.
- Explosion** Material will not burn or explode under normal conditions. Dusts at sufficient concentrations could form explosive mixtures with air.
- Fire-fighting equipment** Wear self-contained breathing apparatus pressure-demand, MSHA /NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

In Case of Spill or Leak: Control the spill at its source. Contain the spill to prevent it from spreading, contaminating soil, or entering sewage and drainage systems or any body of water.

MATERIAL SAFETY DATA SHEET



Nagarjuna Agrichem Limited

Emergency Phone: 040 33605264

Plot No.12-A, 'C' Block, Lakshmi Towers,
Nagarjuna Hills, Punjagutta, Hyderabad- 500082.
Andhra Pradesh, INDIA

ACEPHATE TECHNICAL

MSDS No.: NACL T 3000

Clean the spills immediately. Cover entire spill with absorbing material and place into compatible disposal container. Scrub area with hard water detergent. Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in disposal containers, seal container and arrange for disposition. Notify and consult with proper regulatory authorities.

7. Handling and Storage

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the 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. Follow all MSDS/label precautions even after container is emptied because they may retain product residues.

8. Exposure Controls/Personal Protection

Engineering measures Local exhaust ventilation may be necessary to control any air contaminants to within their TLV's during the use of this product. Facilities storing or utilizing this should be equipped with an eyewash facility and a safety shower.

Personal Protective Equipment (PPE)

Breathing Protection Dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21 C) 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.

Eye protection Safety glasses.

Body Protection Long-sleeved shirt and long pants, Shoes plus socks, chemical – resistant headgear for overhead exposure.

Hand Protection Waterproof gloves.

MATERIAL SAFETY DATA SHEET



Nagarjuna Agrichem Limited

Emergency Phone: 040 33605264

Plot No.12-A, 'C' Block, Lakshmi Towers,
Nagarjuna Hills, Punjagutta, Hyderabad- 500082.
Andhra Pradesh, INDIA

ACEPHATE TECHNICAL

MSDS No.: NACL T 3000

User Safety Recommendations Wash hands before eating, drinking, chewing gum, dusing 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.

9. Physical and Chemical Properties

Appearance Fine, crystalline solid, highly hydroscopic
Odour Rotten cabbage like
Melting Point 86.9 - 91.0°C
pH 4.2 when diluted with water
Vapour Pressure 1.70×10^{-6} mm Hg at 24°C
Water solubility 750 g/L at 20°C
Density 25 - 30 pounds/ft³

10. Stability and Reactivity

Chemical Stability Stable under temperature below 122°F / 50°C.
Conditions to avoid High temperatures and excess moisture
Incompatibility Alkaline materials
Hazardous Polymerization Product will not undergo polymerization
Hazardous decomposition Noxious gases when exposed to alkaline materials. Thermal decomposition may produce oxides of sulfur, nitrogen and phosphorous.

11. Toxicological Information

Acute Oral Toxicity LD₅₀ (Male rats) 1,447 mg/kg b.w
LD₅₀ (Female rats) 1,030 mg/kg b.w

MATERIAL SAFETY DATA SHEET



Nagarjuna Agrichem Limited

Emergency Phone: 040 33605264

Plot No.12-A, 'C' Block, Lakshmi Towers,
Nagarjuna Hills, Punjagutta, Hyderabad- 500082.
Andhra Pradesh, INDIA

ACEPHATE TECHNICAL

MSDS No.: NACL T 3000

Acute Dermal Toxicity	LD ₅₀ (Rabbits) > 10,000 mg/kg b.w
Acute Inhalation	LC ₅₀ (rats): > 15 mg / L air (4 h)
Eye Irritation	Rabbit: Minimal irritation clearing within 24 hours
Skin Irritant	Rabbit: Slightly irritating
Skin Sensitization	Guinea pig: Non-sensitizing

12. Ecological Information

Birds	LC ₅₀ (8 d) for Mallard ducks > 350 mg/kg Chickens 852 mg/kg diet Ring-necked pheasants 140 mg/kg
Fish	LC ₅₀ (96 h) for Rainbow trout >1000 mg/l, Bluegill sunfish 2050 mg/l Channel catfish 2230 mg/l Largemouth black bass 1725 mg/l.
Bees	LD ₅₀ (Contact) : 1.2 µg / bee

13. Disposal Considerations

Waste Disposal Method	Dispose of in accordance with applicable Federal, state and local laws and regulations.
Container disposal	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.

14. Transport Information

Rail/Road (RID/ADR)	
Proper Shipping Name	: ORGANOPHOSPHORUS PESTICIDES, SOLID, N.O.I.B.N., OTHER THAN POISON
Class	: 6.1

MATERIAL SAFETY DATA SHEET



Nagarjuna Agrichem Limited

Emergency Phone: 040 33605264

Plot No.12-A, 'C' Block, Lakshmi Towers,
Nagarjuna Hills, Punjagutta, Hyderabad- 500082.
Andhra Pradesh, INDIA

ACEPHATE TECHNICAL

MSDS No.: NACL T 3000

UN No.	:	2783
Packing Group	:	III
Sea (IMDG – Code)		
Proper Shipping Name	:	ORGANOPHOSPHORUS PESTICIDES, SOLID, N.O.I.B.N., OTHER THAN POISON
Class	:	6.1
IMDG No.	:	2783
Packing Group	:	III
Air (ICAO/IATA)		
Proper Shipping Name	:	ORGANOPHOSPHORUS PESTICIDES, SOLID, N.O.I.B.N., OTHER THAN POISON
Class	:	6.1
UN No.	:	2783
Packing Group	:	III

15. Regulatory Information

EU- Classification	Xn	Harmful
Hazard Symbol		
Special Risks (R-Phrases)	R 22 R 36 R 43 R50/53	Harmful if swallowed Minimal irritation May cause sensitization by skin contact Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
Safety Advice (S- Phrases)	2 20 24/25 36	Keep out of the reach of children. When using do not eat or drink Avoid contact with skin / eyes Wear suitable protective clothing
International WHO Toxicity Classification	III	Slightly hazardous

MATERIAL SAFETY DATA SHEET



Nagarjuna Agrichem Limited

Emergency Phone: 040 33605264

Plot No.12-A, 'C' Block, Lakshmi Towers,
Nagarjuna Hills, Punjagutta, Hyderabad- 500082.
Andhra Pradesh, INDIA

ACEPHATE TECHNICAL

MSDS No.: NACL T 3000

16. Other Information

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall we be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if we have been advised of the possibility of such damages.

Revised date: 04.02.2014