

MATERIAL SAFETY DATA SHEET

Achook

1. IDENTIFICATION OF THE SUBSTANCE / PREPARATION AND THE COMPANY

Product Name: Neem based Nematicide
Trade name: Achook
Company: Godrej Agrovet Ltd.
 Pirojshanagar, Vikhroli (E)
 Easter Express Highway
 Mumbai - 400 079 INDIA
Manufacturer: Godrej Agrovet Ltd.
 Lote Parshuram
 Ratnagiri - 415722, India
 Customer Care No. +91-22-25194491
Chemical Group: Triterpenoids
Use: Nematicide
CAS number: 11141-17-6 Azadirachtin A
 95507-03-2 Azadirachtin B

2. COMPOSITION / INFORMATION ON INGREDIENTS

| Ingredients | Concentration (%) |
|--------------------------|-------------------|
| Azadirachtin concentrate | 0.15 |
| Neem kernel Extract | 20.0 |
| Emulsifier & Adjuvents | 15.0 |
| Solvent | 64.85 |

3. HAZARDS IDENTIFICATION

Routes of Exposure: Exposure to Azadirachtin can occur through inhalation, ingestion, eye or skin contact and absorption through skin.
Signs and symptoms of Exposure: Acute exposure - although no data are available on the signs and symptoms of overexposure to Achook based on its cholinesterase inhibiting properties, overexposure could result in headaches, sweating, nausea and vomiting, diarrhoea, loss of coordination.

4. FIRST AID MEASURES

Skin Contact: Remove all contaminated clothes and shoes. Wash off immediately with plenty of soap and water (15 - 20 minutes). Get medical attention immediately.
Eye Contact: Rinse immediately with plenty of water and seek medical advice.
Inhalation: Remove from exposure area to fresh air immediately. If breathing has stopped, perform artificial respiration. Keep person warm and at rest. Treat symptomatically and supportively. Get medical attention immediately.

Ingestion: Remove by gastric lavage and catharsis. Maintain blood pressure and airway. Give oxygen if respiration is depressed. Do not perform gastric lavage if victim is unconscious. Get medical attention immediately.

5. FIRE FIGHTING MEASURES:

Material is highly flammable. In case of fire following extinguishing media may be used:

Extinguishing Media: Dry chemical carbon dioxide, halogen, water spray or standard foam. High pressure water jet media.
Special Protective Equipment: As for all fires involving chemicals, chemical protection suit, suitable gloves, equipment for fire-fighters and boots, and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Use personal protective equipment.
Cleanup Methods: Do not touch spilled material. Stop leak if you can do it without risk. For small spills, take up with sand or other absorbent material and place into containers for later disposal. Move containers from spill area. For large spills, dike far ahead of spill for later disposal. Keep unnecessary people away. Isolate hazard area and deny entry. Ventilate closed space.
Environmental precautions: Prevent contamination of water.

7. HANDLING AND STORAGE

Handling precautions: Do not eat, drink or smoke when handling; wash hands before eating, drinking or smoking.
Storage: Store in locked, well-ventilated store room, away from children and unauthorised personnel and food and animal feed.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Ventilation: Use local exhaust at all process locations where vapour or mist may be emitted. Ventilate all transport vehicles prior to unloading.
Work clothing: Depending upon concentrations encountered, wear coveralls or long-sleeved uniform and head covering. For large exposures as in the case of spills, wear full body cover barrier suit, such as a rubber rain suit. Leather items - such as shoes, belts and watch bands - that become contaminated should be removed and destroyed. Launder all work clothing before reuse (separately from household laundry).
Eye Protection: For splash, spray or mist exposure, wear chemical protective goggles or a face shield.

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| Respiratory Protection: | For splash, spray or mist exposure wear, as a minimum, a properly fitted half-face or full-face air purifying respirator which is approved for pesticides. Respirator use and selection must be based on airborne concentrations. |
| Gloves: | Wear chemical protective gloves. Thoroughly wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks. |
| Personal Hygiene: | Clean water should be available for washing in case of eye or skin contamination. Wash skin prior to eating, drinking or using tobacco. Shower at the end of the work day. |

9. PHYSICAL AND CHEMICAL PROPERTIES

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| State: | Liquid |
| Appearance: | Clear liquid |
| Vapour Density: | Not available |
| Density: | 0.9 to 0.93 g / cc |
| Boiling point: | >50 ° C |
| Miscibility in Water: | Forms emulsion in water and soluble in organic solvents |
| Odour: | Pungent |
| Inflammability: | Highly flammable when exposed to direct flame |
| Flash point: | 40 ° C |
| Explosiveness: | Non explosive |
| Chemical Stability: | Stable at NTP |

10. STABILITY AND REACTIVITY

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| Stability: | Stable under normal temperatures and pressures. |
| Conditions to avoid: | Contact with strong acids and alkalis and high temperatures and sunlight |
| Material to avoid: | Strong acids and alkalis, high temperature and sunlight |
| Hazardous decomposition: | Thermal decomposition products - carbon monoxide gas |

11. TOXICOLOGICAL INFORMATION

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| Acute Oral Toxicity in rats: | LD 50 > 5000 mg/kg.bw |
| Acute Oral toxicity in mice: | LD 50 > 5000 mg/kg.bw |
| Acute Dermal toxicity in rats: | LD 50 > 2000 mg/kg.bw |
| Acute Dermal toxicity in rabbits: | No irritation |
| Primary skin irritation in rabbits: | No irritation on abraded skin |
| Acute Dermal toxicity of a.i. in rabbits: | LD 50 > 10000 mg/kg.bw |
| Mucous membrane irritation in rabbits: | No irritation |
| Acute inhalation in rats: | LC 50 > 6.74 ± 1.64 mg/L air |
| Phytotoxicity: | Non phytotoxic |

12. ECOLOGICAL INFORMATION

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| Environmental fate: | Toxicity to fish: LC 50 at 96 hours 6.58 mg/L |
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13. DISPOSAL CONSIDERATIONS

Thoroughly drain containers before disposal, and add drainings to the application equipment. When returnable container is empty or contents no longer required return it to the point of purchase. Do not contaminate the container with water or other materials. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return containers to recycler or designated collection point. If not recycling, break, crush or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500 mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt. Dispose of waste product through a reputable waste contractor.

14. TRANSPORT INFORMATION

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| Proper shipping name: | Neem based EC |
| Hazard Class: | Non Haz |
| UN Number: | NA |
| Packing Group: | NA |

15. DISCLAIMER

This MSDS summarises our best knowledge of the health and safety hazards information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

16. OTHER INFORMATION

The information supplied in this Safety Data Sheet is given in good faith. It is accurate to the best of our knowledge and belief and represents the most up to date information.

This material safety data sheet supercedes any previous information.