

MATERIAL SAFETY DATA SHEET**AZADIRACHTIN TECHNICAL****SECTION I****MANUFACTURER INFORMATION**

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Date Prepared

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SECTION II

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HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	%	CAS No.	OSHA/PEL	ACGIH/TLV	OTHER LIMITS RECOMMENDED
Azadirachtin A	40-45%	11141-17-6	None known	None known	None known
Azadirachtin B		95507-03-2			
Other neem Compounds, Azadirachtin F Azadirachtin H Azadirachtin I Salannin Nimbin and fatty acids etc.	55-60%	118855-02-0 134788-15-1 134788-16-2 992-20-1 5945-86-8	Not known	Not known	Not known
Other compounds of Neem origin in the extract		Not known	Not known	Not known	Not known

SECTION III**PHYSICAL/CHEMICAL CHARACTERISTICS**

Appearance	: Brown yellow free flowing powder
Odour	: Characteristic neem odour
Solubility in water	: 0.26 gm/l
Specific tap density	: 0.71 g/ml
Molecular Weight	: 720 (Azadirachtin A) : 662 (Azadirachtin B)
Empirical Formula	: C ₃₅ H ₄₄ O ₁₆ (Azadirachtin A) : C ₃₃ H ₄₂ O ₁₄ (Azadirachtin B)
Acidity	: < 0.24%
pH	: 7 ± 0.02

Viscosity : Powder
 Corrosion Characteristics : Non corrosive to HDPE containers
 Storage : 20-25°C

SECTION IV

FIRE AND EXPLOSION DATA

Flash Point : > 100 deg C - No Fire Hazard
 Flammable Limits : Not known
 Extinguishing Media : Polymer foam or carbon dioxide
 Special Fire Fighting Procedures : Wear protective clothing and face shields
 Unusual fire and explosion hazards : No hazard

SECTION V

REACTIVITY DATA

Stability : Stable at ordinary conditions of use and storage
 Conditions to avoid : High temperature or sunlight or light quickly degrade the material
 Materials to Avoid : Acids, alkali or oxidizing agents.
 Hazardous Decomposition : No hazardous materials are produced
 Hazardous polymerization : Not occur

SECTION VI

HEALTH HAZARD DATA

Mode of Entry : Inhalation - yes
 Skin - yes
 Ingestion- yes

Health Hazards:

Acute Toxicity : Acute oral Rat LD 50>5 g/kg
 : Acute Dermal Rat LD50>2g/kg
 : Acute Inhalation Rat LC 50>0.72 mg/L
 : Skin Irritation - Rabbit > No Irritation
 : Skin Sensitization-Guinea Pig-Sensitisation
 : Eye Irritation-Rabbit-Positive

Chronic Toxicity: Developmental toxicity-NOAEL-50 mg/kg
 : Subchronic feeding>3200 mg/kg
 : Bacterial Mutation Assay - Non mutagenic

: Mammalian cell Gene - Negative
 : Mutation Assay - Negative
 : Carcinogenicity-Non carcinogenic

SIGN AND SYMPTOMS OF EXPOSURE

Inhalation : May be irritating to mucous membrane and eyes
 Ingestion : May cause drowsiness
 Skin Contact : No irritation will occur
 Eye Contact : May cause irritation
 Chronic Exposure : Continuous exposure may cause implications

EMERGENCY AND FIRST AID PROCEDURE

Inhalation : Remove to fresh air
 Ingestion : Induce vomiting by gastric lavage, call physician immediately
 Skin Contact : Wash skin with soap
 Eye Contact : Wash eyes with excessive water.
 Chronic Exposure : Continuous exposure may cause implications

SECTION VII

ECOLOGICAL SAFETY

Ready to use Formulations (1% level) prepared from Azadirachtins Technical has exhibited high degree ecosafety as indicated below:

- | | | |
|----|---|---|
| 1. | Effect on Honey Bees | - Harmless |
| 2. | Effect on Earthworm (LC50) | - > 1000 mg/kg - safe |
| 3. | Effect on predators | - Harmless |
| 4. | Hazard to soil Microflora | - Non Hazardous |
| 5. | Acute Daphnia Immobilisation Test (EC50)- | > 1000 mg/ltr - safe |
| | | NOEL- 197.5 mg/ltr |
| 6. | Acute toxicity to fish-Rainbow Trout (LC50) | - 440 mg/ltr (24 hrs)
- 150 mg/ltr (96 hrs)
- 50 mg/ltr |
| | | NOEC |
| 7. | Algal Inhibition Test | - Non inhibitory/Non stimulant |
| 8. | Metabolism in soil | - Rapid Decomposition in soil |
| 9. | Degradability in water | - Readily Biodegradable in water |

SECTION VIII

PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Flush the area with water. Do not allow water to contaminate surrounding area. Personnel in operation may wear protective clothing.

WASTE DISPOSAL METHOD

Do not contaminate water, food, or feed by storage or disposal. Disposal of containers in an approved disposal facility. Ensure compliance with local, state and federal regulations.

PRECAUTIONS FOR HANDLING AND STORAGE

Keep in a cool and dry place. Avoid direct sunlight. Open dumping is prohibited. Dispose containers in an approved waste facility.

OTHER PRECAUTIONS

Shipping Name	: Neem Extract Concentrate
Shipping Containers Markings	: Neem Extract Concentrate
Shipping Container Labels	: Neem Extract Concentrate
Special Instructions	: No special instruction on handling required
Flammability	: Non flammable
Transport by Air	: Safe for Air Transport

SECTION IX**CONTROL MEASURES**

Respiratory Protection	: Use spraying clothings to avoid spray mist
Protective Gloves	: Wear protective gloves
Eye protection	: Wear safety goggles
Work Practices	: Observe good personnel hygiene. Wash hands after usage of the product

SECTION X**Regulatory Information**

Designation : TSAC (Toxic substance control Act) Not regulated
 CERCLA (Comprehensive Emergency Response Compensation and Liability Act) Not listed
 SARA TITLE III (Superfund Amendments and Reauthorisation Act)
 311/312 Hazard Categories: Not regulated
 313 Reportable Ingredients: None listed
 : Eco-friendly Neem Based Pesticide of Plant Origin
 : Non Hazardous Material

SECTION XI**Information Origin**

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