

MATERIAL SAFETY DATA SHEET

AZADIRACHTIN TECHNICAL

(NEEM BASED NATURAL PRODUCT)

SECTION 1

MANUFACTURER INFORMATION

Ozone Biotech

(A Division of Shivanshu Sintered Products Pvt. Ltd.)

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Date Prepared: December 2004

SECTION 2

HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Hazardous Components	%	CAS No.	OSHA/PEL	ACGIH/TLV	OTHER LIMITS RECOMMENDED
Azadirachtin A	25% - 35%	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.	75% - 65%	118855-02-0	Not known	Not known	Not known
		134788-15-1 134788-16-2 992-20-1 5945-86-8			
Other compounds of Neem origin in the extract		Not known	Not known	Not known	Not known

SECTION 3

PHYSICAL DATA & INGREDIENTS

Appearance	: Yellowish free flowing powder
Odour	: Characteristic Neem Odour
Solubility in water	:
Specific tap density	:
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	:
pH	:
Viscosity	: Powder
Corrosion Characteristics:	Non corrosive to HDPE containers
Storage	: Below 20°C

SECTION 4

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 5

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 6

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-
Sensitization
: Eye Irritation-Rabbit-Positive

Chronic Toxicity : Developmental toxicity-NOAEL-50
mg/kg
: Sub chronic feeding>3200 mg/kg
: Bacterial Mutation Assay - Non
mutagenic
: Mammalian cell Gene - Negative
: Mutation Assay - Negative
: Carcinogen city-Non carcinogenic

SECTION 7

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

SECTION 8

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 9

SPILL OR LEAK PROCEDURES

Environmental Hazard:	Do not apply directly to water, or to areas where surface water is present. This product is toxic to bees exposed to direct treatment.
Spillage :	Absorb the liquid and scrub the area with detergent and water. Avoid runoff into storm sewers and ditches that lead to waterways
Waste Disposal Method:	Wastes resulting from the use of this product may be disposed of onsite or at an approved waste disposal facility.

SECTION 10

i. SPECIAL PROTECTION INFORMATION

Respiratory Protection	:	No special requirements.
Ventilation	:	No special ventilation requirements.
Eye Protection	:	Use of safety goggles is recommended.
Skin Protection	:	Use of rubber gloves is recommended.

ii. ECOLOGICAL SAFETY

Ready to use Formulations (1% level) prepared from Ozoneem Aza 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 Micro flora | - Non Hazardous |
| 5. | Acute Daphnia Immobilization Test (EC50) | - > 1000 mg/liter - safe |
| | | NOEL- 197.5 mg/liter |
| 6. | Acute toxicity to fish-Rainbow Trout (LC50) | - 440 mg/liter (24 hrs)
- 150 mg/liter (96 hrs)
- 50 mg/liter |
| | | 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 11

HANDLING & STORAGE CONDITIONS

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

SECTION 12

TRANSPORTATION INFORMATION

D.O.T Proper Shipping Name : Azadirachtin technical
Technical Shipping Name : Azadirachtin technical
D.O.T. Hazard Class : N / A

SECTION 13

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 14

CONTROL MEASURES

Respiratory Protection : Use spraying clothing's 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 15

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 Reauthorization Act)
311/312 Hazard Categories: Not regulated

313 Reportable Ingredients: None listed
: Eco-friendly Neem Based Pesticide of Plant Origin
: Non Hazardous Material

SECTION 16

Information Origin

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