# Material Safety Data Sheet

### *Trifolio-M* GmbH

#### 1. **IDENTIFICATION OF SUBSTANCE**

 PRODUCT DETAILS Trade name
 NeemAzal-T/S

 MANUFACTURER / SUPPLIER
 Trifolio-M GmbH, Herstellung und Vertrieb hochreiner Biosubstanzen; Dr.-Hans-Wilhelmi-Weg 1; D-35633 Lahnau
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USE
 Insecticide, Plant Protection agent

#### 2. COMPOSITION / DATA ON COMPONENTS

NeemAzal-T/S (Neem-seed-extract-formulation)Leading compoundAzadirachtin A (standardized to 1%)CAS-No. (Azadirachtin A)11141-17-6MW (Azadirachtin A)720,7Formula (Azadirachtin A)C35H44O16

#### **3. HAZARDS IDENTIFICATION**

Even natural materials and its formulations may be hazardous. Hence one has to handle such products with care especially while mixing and applying the formulation.

#### **4. FIRST AID MEASURES**

After skin contact wash with soap and rinse with water
 After eye contact rinse with plenty of water, get medical attention if required
 Ingestion do not induce vomiting, call a physician

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#### **5.** FIRE FIGHTING MEASURES

Extinguishing agents Fire and explosion hazards  $CO_2$  or polymer foam  $CO, CO_2$ 

#### 6. ACCIDENTAL RELEASE MEASURES

- PERSON RELATED SAFETY PRECAUTIONS
  Wear safety glasses and rubber gloves.
- MEASURES FOR ENVIRONMENTAL PROTECTION
  Do not allow to enter the ground/soil and the ground water.
- MEASURES FOR CLEANING / COLLECTING
  Collect material, flush leftovers with water.

#### 7. HANDLING AND STORAGE

- HANDLING
  No further requirements.
- STORAGE
  Keep cool and dry. Avoid direct sunlight.

#### 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

- > CRITICAL VALUES
  - TLV (threshold limit value): not established
- GERNERAL PROTECTIVE AND HYGIENICS MEASURES
  Keep away from food, feed and beverages. Wash hands after usage.

#### **9.** PHYSICAL AND CHEMICAL PROPERTIES

- Form viscous liquid
- > Colour brown
- Smell characteristic Neem odour
- Boiling point not established
- > Flash point =  $171^{\circ}$
- Self-inflammability NeemAzal-T/S is not self igniting (own estimation)
- > Danger of explosion NeemAzal-T/S is not explosive (own estimation)
- > Vapour pressure  $3.6 \cdot 10^{-11}$  hPa (estimated for Azadirachtin A)
- Density 0.98 g/ml
- Solubility in water emulsifiable in water

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> pH-value> Viscosity

7.00 ± 0.02 281.4 mm<sup>2</sup>/s (20℃)

#### **10. STABILITY AND REACTIVITY**

- > CONDITIONS TO AVOID
- High temperature, sunlight.
  MATERIALS TO AVOID Acids, alkalis and oxidizing agents.
- DANGEROUS PRODUCTS OF DECOMPOSITION None.

#### **11. TOXICOLOGICAL INFORMATION**

Y	<i>Acute toxicity</i> Oral - rat: Dermal - rat Inhalation - rat <i>PRIMARY IRRITANT EFFECT</i>	$LD_{50} > 5000$ $LD_{50} > 2000$ $LC_{50} > 5.4 r$	) mg/kg
	Eye - rabbit	may cause	mild irritations
	Skin - rabbit	may cause	mild irritations
Sensitization - guinea-pig no sensitizing effect			ng effect
$\succ$	CHRONIC TOXICITY		
	Micronucleus test - mouse	e nega	tive
	Mutagenic effects	not o	bserved
$\succ$	REPRODUCTIVE TOXICITY		
	NeemAzal-F (5% Azadirachtin A)		NOAEL = 5000 mg/kg diet
$\succ$	CARCINOGENICITY		
	NeemAzal-F(5% Az.A) - mouse		80 weeks- not induced

#### **12. ECOLOGICAL INFORMATION**

Effect on honeybees	harmless
Effect on earthworms	harmless (> 1000 mg/kg)
Effect on predators	harmless
Hazard to soil microflora	not hazardous
Acute daphnia immobilization	EC <sub>50</sub> > 50 mg/l
Acute fish toxicity (rainbow trout)	LC <sub>50</sub> = 160 mg/l (96 hrs)
Algal inhibition test	non inhibitory, non stimulant

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Metabolism in soil	rapid decomposition in soil

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Degradability in water

readily biodegradable in water

#### **13. DISPOSAL CONSIDERATIONS**

Disposal to be made according to official regulations. Do not allow material to contaminate the surrounding area and the ground water.

#### **14. TRANSPORT INFORMATION**

No hazardous material in regard to transportation regulations.

#### **15.** REGULATORY INFORMATION

- Designation according to EC guidelines No hazardous material.
- NATIONAL REGULATIONS
  Water hazard class
  non water hazardous material (on estimation)
- FURTHER REGULATIONS
  The guidelines for the prevention of accidents according to the local regulations have to be followed.

#### **16.** OTHER INFORMATION

ORIGIN OF THE ISSUED DATA
 EID Parry Ltd. (India)
 Trifolio-M GmbH (Germany)

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.