



Safety Data Sheet

According to regulation (EC) no. 1907/2006



Trade Name: NeemAzal[®] Technical

Creation Date: April 25, 2013

Version: 1.0

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1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY UNDERTAKING

1.1 Product identifier: NeemAzal[®] Technical

1.2 Relevant identified uses of the substance or mixture and uses advised against

Insecticide and Acaricide

1.3 Details of the supplier of the safety data sheet

E.I.D. Parry (India) Ltd,
Bio Products Division
Dare House, 4th Floor,
2/234, NSC Bose Road,
Parrys Corner, Chennai - 600 001,
INDIA
Tel: +91 44 2530 6513 / 18
Fax: +91 44 253 58114

E-Mail: narasimharaok@parry.murugappa.com

1.4 Emergency telephone number: Mr. Devendra Kumar

Phone: +91 9686192436

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Not a hazardous material according to Regulation (EC) No. 1272/2008
This material is not classified as dangerous according to Directive 67/458/EEC

2.2 Label elements

The material does not need to be labeled in accordance with EC directives or respective national laws.

2.3 Other hazards None



3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substance

NeemAzal[®] Technical is extract from Neem kernel, leading compound: Azadirachtin A

3.2 Composition / Information on Ingredients

| Component | CAS # | Weight (%) |
|--|--|------------|
| Azadirachtin A | 11141 – 17 – 6 | 25 – 35% |
| Azadirachtin B | 95507 – 03 – 2 | 7 – 10% |
| Other Neem Compounds, Aza – F Aza – H, Aza – I Salannin, Nimbin and Fatty acids etc. | 118855 – 02 – 0 134788 – 15 – 1 134788 – 16 – 2 922 – 20 – 1 5945 – 86 – 8 | 55 – 60% |
| Other compounds of Neem | Not known | Not known |

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| | | |
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| origin in the extract | | |
|-----------------------|--|--|

Classification according to Regulation (EC) No. 1272/2008:

GHS07; Skin Sensibilisation cat. 1; H317 (Signal word: Warning)

Classification according to Directive 67/458/EEC respectively Regulation (EC) No. 1999/45:
Xi; R43 (irritant)

Further information and wording of the H- and R-Phrases can be found in section 16.

4. FIRST AID MEASURES

4.1 Description of first aid measures:

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing give artificial respiration. Consult a physician.

In case of skin contact:

Wash off with soap and plenty of warm water. Consult a physician.

In case of eye contact:

Rinse thoroughly with plenty of water for at least 15 min. Consult a physician.

If swallowed:

Do not induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

To the best of our knowledge there are no known symptoms and effects.

4.3 Indication of any immediate medical attention and special treatment needed

If person is unconscious: Call an ambulance.

5. FIREFIGHTING MEASURES

5.1 NFPA hazard classification

Health hazard: 1, Fire hazard: 0, Reactivity: 0

5.2 Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, dry chemical or carbon dioxide.



Unsuitable extinguishing media: Full water jet.

5.3 Special hazards arising from the substance or mixture

Carbon oxides.

5.4 Advice for firefighters

Keep containers cool with water spray. Wear self contained breathing apparatus for fire fighting if necessary.

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6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Environmental precautions

Dike large spatter, using absorbent or impervious materials such as sand or clay. Prevent further spillage if safe to do so. Do not let product enter drains.

Discharge into environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Flush the area with water.

Do not allow water to contaminate surrounding area.

Personnel in operation may wear protective clothing

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

6.4 Reference to other sections

For personnel protection see section 8. For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid breathing fine dust. Do not eat, drink or smoke.

Keep away from food, drinks and feeding stuff. Wash hands after use. Remove contaminated clothing and protective equipment before entering eating areas.

7.2 Conditions for safe storage, including any incompatibilities

Store in cool, dry and well-ventilated place. Avoid direct sunlight.

Open dumping is prohibited. Dispose containers in an approved waste facility.

7.3 Specific end uses



NeemAzal[®] Technical is a plant protection product which is used as insecticide and acaricide after suitable dilution into formulation.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

If handled appropriately, exposure limit values (AGW [DE], OEL [EU]) are not exceeded.

8.2 Exposure controls

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Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday. Keep away from children.

Personal protective equipment

Eye/face protection

Tightly fitting safety goggles. Use equipment for eye protection tested and approved under appropriate government standards such as EN 166(EU).

Skin protection:

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product.

Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body protection:

Wear Cotton clothes.

Respiratory protection

Use with adequate ventilation.

Environmental exposure controls

See section 6 and 7.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| Appearance: | Free flowing powder |
| Colour: | Brown yellow |
| Odour: | Characteristic Neem odour |
| pH-Value: | 7 ± 0.2 |
| Solubility in water: | 0.3 gm/100 ml (estimated for Azadirachtin A) |
| Specific tap density: | 0.71 g/ml |
| Melting Point range: | 154 - 158°C (estimated for Azadirachtin A) |
| Vapour Pressure | < 10 ⁻¹⁷ torr (<10 ⁻¹⁵ pa) - estimated for Azadirachtin A |
| Active Ingredient: | Azadirachtin A |
| Molecular Weight: | Azadirachtin A- 720.7 |
| Empirical Formula: | C ₃₃ H ₄₄ O ₁₆ (for Azadirachtin A molecule) |
| Partition coefficient (Azadirachtin A) | 9.047±1.098 (P _{OW} ± Uncertainty) |



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| Flammability: | Not flammable |
| Explosive properties: | NeemAzal [®] Technical lack nitro groups and thus have no explosability |
| Lower explosive limit: | No data available |
| Upper explosive limit: | No data available |

10. Stability and Reactivity

10.1 Reactivity

No data available.

10.2 Chemical stability

NeemAzal[®] Technical is chemically stable under normal conditions of use and storage (room temperature).

10.3 Possibility of hazardous reactions

If used appropriate no hazardous reactions are expected.

10.4 Conditions to avoid

High temperature and strong light sources.

10.5 Incompatible materials

Strong acids. Strong bases. Strong oxidizing or reducing agents.

10.6 Hazardous decomposition products

Carbon monoxide, Carbon dioxide

11. TOXICOLOGICAL INFORMATION

11.1 Acute toxicity

LD50 (oral, rat) > 5000 mg/kg

LD50 (dermal, rat) > 2000 mg/kg

Skin corrosion/irritation

Skin (rabbit): not irritating (May cause preliminary light reddening).

Serious eye damage/eye irritation

Eye (rabbit): mild

Skin sensitization

Guinea pig: Delayed contact hypersensitivity.

Germ cell mutagenicity

No data available.



Reproductive toxicity

NOAEL = 50 mg/kg/day

Specific target organ toxicity – single exposure

No data available.

Specific target organ toxicity – repeated exposure

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No data available.

Chronic toxicity

NOAEL = 100 ppm (90 day feeding to rat)

Neurotoxicity

NOAEL = 1000 mg/kg

Mutagenicity

Micronucleus test: mouse: negative (NeemAzal[®] technical)

Mutagenicity studies: not mutagenic (NeemAzal[®] technical)

Aspiration hazard

No data available.

Potential health effects

To the best of our knowledge there are no potential health effects.

Signs and Symptoms of Exposure

To the best of our knowledge there are no known signs and symptoms of exposure.



12. ECOLOGICAL INFORMATION

Ready to use Formulations (1.2% level) prepared from NeemAzal[®] Technical has exhibited high degree eco safety as indicated below:

12.1 Toxicity

| | |
|-----------------------------|--|
| Toxicity to fish: | Trout (acute) LC50 (24 h) = 440 mg/L Trout (acute) LC50 (96 h) = 150 mg/L NOEC = 50 mg/L |
| Aquatic invertebrates: | Acute Daphnia Immobilisation Test (EC 50) > 1000 mg/L – safe NOEL 197.5 mg/L |
| Algae-Inhibition-Test: | Not inhibitory, not stimulating. NOEC 22 mg/L |
| Effects on honeybees: | Acute: non-hazardous Reproducibility: No effect on reproducibility at an application rate of 6L/ha |
| Effects on earthworms: | Non-hazardous (>1000 mg/kg) |
| Effects on beneficials: | General: non-hazardous – e.g. predatory mites (<i>Typlodromus pyri</i>), ground beetles (<i>Poecilius cupreus</i>), seven-spot ladybugs (<i>Coccinella septempunctata</i>) and braconid wasps (e.g. <i>Aphidius rhopalosiph</i>). |
| Hazard to soil microflora : | Non Hazardous |

12.2 Persistence and degradability

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Rapid degradation in water and soil; readily biodegradable.

12.3 Bioaccumulation potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT und vPvB assessment

No data available

12.6 Other adverse effects

Harmful to syrphid flies (*Episyrphus balteatus*).

13. Disposal considerations

13.1 Waste treatment methods

Offer surplus and non-recyclable substances to a licensed disposal company in accordance with the Directive No. 2008/98/EC.

Waste code [DE]: 02 01 09.

Packaging

Empty containers should be recycled after washing out.

14. TRANSPORT INFORMATION

14.1 UN-Number

ADR/RDI: - IMDG: - IATA: -

14.2 UN proper shipping name

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

14.3 Transport hazard class(es)

ADR/RDI: - IMDG: - IATA: -

14.4 Packaging group

ADR/RDI: - IMDG: - IATA: -

14.5 Environmental hazards

ADR/RDI: no IMDG Marine pollutant: no IATA: no



14.6 Special precautions for user

See sections 6, 7 and 8

14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

NeemAzal[®] Technical is only released in suitable containers in accordance with traffic laws.

14.8 Transport by Air: Safe for Air Transport

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15. Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Regulation (EC) No. 2037/2000 (Substances that deplete the ozone layer):

Not applicable.

Regulation (EC) No. 850/2004 (Persistent organic pollutants):

Not applicable.

Regulation (EC) No. 689/2008 (Export and import of dangerous chemicals):

Not applicable.

National regulations

Water hazard class

Class: 0 (no hazard to water - own classification).

Directive No. 2004/42/EC (Volatile organic compounds)

Not applicable.

Application regulations according to the plant protection Act (PflSchG)

SB 001 Avoid any unnecessary contact with the product. Misapplication can cause health damage. To avoid risks for humans and environment attend to the directions of use.

SB 010 Keep away from children.

NW 466 Prevent leakage or spillage. Do not let product enter drains. Discharge into environment must be avoided.

NN 391 Formulated NeemAzal[®] Technical is harmful to syrphid flies (*Episyrphus balteatus*).

15.2 Chemical Safety Assessment

Chemical Safety Assessment has not been carried out with NeemAzal[®] Technical.

16. OTHER INFORMATION

Hazard warnings regarding sections 2 and 3

Classification and labeling is in accordance with Directive 67/548/EEC respectively Regulation (EC) No. 1999/45 and with Regulation (EC) No. 1272/2008.

Regulation (EC) no. 1272/2008:





GHS07 - Warning

Skin sensitization, Category 1

H317 – May cause an allergic skin reaction.

Directive 67/548/EEC:

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Hazard symbol: Xi - irritant.

R43 – May cause sensitisation by skin contact.

TSCA (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



Bibliographical references and data sources

Regulations

Classification, packaging and labelling of dangerous preparations (Regulation (EC) No. 1999/45) amended by Regulation (EC) No. 1907/2006.
 Dangerous Substances Directive 67/548/EEC amended by Directive 2009/2/EC.
 Registration, Evaluation, Authorisation and Restriction (REACH) Regulation (EC) No. 1907/2006, amended by Regulation (EU) No. 453/2010.
 Regulation (EC) No. 1272/2008, amended by Regulation (EC) No. 790/2009.

Abbreviations

| | |
|-----------|---|
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| CAS | Chemical Abstracts Services |
| EC | Effective concentration |
| | European community |
| EN | European Norm |
| IATA-DGR | International Air Transport Association-Dangerous Goods Regulation |
| ICAO-TI | International Civil Aviation Organization - Technical Instructions |
| IMDG-Code | International Maritime Code for Dangerous Goods |
| LC | Lethal concentration |
| LD | Lethal dose |
| MARPOL | Maritime Pollution Convention |
| OECD | Organisation for Economic Co-operation and Development |
| PBT | persistent, bioaccumulateable, toxic |
| RID | International Rule for Transport of Dangerous Substances by Railway |

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| | |
|------|--|
| UN | United Nations (Vereinte Nationen) |
| VOC | Volatile organic compounds |
| vPvB | very persistent, very bioaccumulateable |

Information Origin

E.I.D. Parry (India) Ltd,
 Bio Products Division
 Dare House, 4th Floor,
 2/234, NSC Bose Road, Chennai - 600 001 INDIA

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 EPA Establishment #: 071908-IND-001

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