

Grosafe Chemicals Limited

SAFETY DATA SHEET

BioNeem™

SECTION 1: IDENTIFICATION OF THE SUBSTANCE AND COMPANY

1.1 Identifiers

Product name: **BioNeem™**
Other Name(s): Emulsifiable concentrate containing azadirachtin 10 g/L

1.2 Recommended use of the chemical and restrictions on use

Product Use: Insecticide

1.3 Supplier contact details:

Company name: Grosafe Chemicals Limited
Address: 20 Jean Batten Drive Mt Maunganui, 3116
Telephone: 0800 220 002
Email: info@grosafe.co.nz

Emergency telephone number 0800 CHEMCALL (0800 243 622)

SECTION 2: HAZARD IDENTIFICATION

2.1 Classification of the Hazardous Chemical

Hazardous substance according to Hazardous Substances and New Organisms (HSNO) Act 1996

HSNO Substance Approval: HSR007949

Classifications: Eye irritation Category 2, Skin sensitisation Category 1, Reproductive toxicity Category 2, Hazardous to terrestrial vertebrates, Hazardous to the aquatic environment chronic Category 3.

2.2 Label elements:

Pictograms:



Signal Word: **WARNING**

Hazard statements:

H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H361 Suspected of damaging fertility or the unborn child.
H412 Harmful to aquatic life with long lasting effects.
H433 Harmful to terrestrial vertebrates.

Additional labelling statements required under Hazardous Substances (Labelling) Notice 2017

Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

Do not apply directly into or onto water.

Precautionary statements:*Prevention*

P103	Read label before use.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing mist/spray.
P264	Wash hands thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/clothing and eye protection.
P281	Use personal protective equipment as required.

Response

P308 + P313	IF exposed or concerned: Get medical advice/attention.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P363	Wash contaminated clothing before re-use.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice/attention.

Storage

P405 .Store locked up.

Disposal

P501 Dispose of contents/container in accordance with local regulations.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	CAS	Proportion % w/w
Azadirachtin	11141-17-6	1
Neem oil clarified hydrophobic extract	947173-77-5	30
Petroleum distillates, hydrated, light	64742-65-1	50 - 55
Other ingredients	Trade secret	balance

This is a commercial product whose exact ratio of components may vary slightly.

SECTION 4: FIRST AID MEASURES**4.1 Description of first aid measures****General Information:**

For advice call the National Poison Centre, telephone 0800 POISON [0800 764 766]. Have label or Safety Data Sheet at hand. If exposed or concerned: Get medical advice.

Ingestion: If swallowed, rinse mouth with water. Call the NATIONAL POISONS CENTRE or doctor for advice if you feel unwell.

Skin Contact: Remove contaminated clothing and wash skin with plenty of soap and water. Get medical advice if irritation or rash occurs.

Eye Contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice if irritation persists.

Inhalation: Remove person to fresh air and keep at rest in a position comfortable for breathing. Call the NATIONAL POISONS CENTRE or doctor for advice if you feel unwell.

4.2 Symptoms caused by exposure

Unlikely to cause harmful effects under normal conditions of handling and use.

4.3 Medical attention and special treatment

Treat symptomatically.

SECTION 5: FIRE FIGHTING MEASURES

5.1 Suitable extinguishing media

Use water spray or fog, foam, CO₂ or dry chemical as appropriate for surrounding materials, Contain extinguishing media to prevent runoff into drains, sewers, waterways.

5.2 Specific hazards arising from the chemical

Fire decomposition products may be toxic/harmful and/or irritating if inhaled.

Evacuate people to safe area upwind of fire.

5.3 Special protective equipment and precautions for fire fighters

Wear full personal protective equipment including with self-contained breathing apparatus (SCBA).

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Have this SDS available. In the event of a spill, wear appropriate protective clothing, eye and hand protection. Wash contaminated personal protective equipment and clothing and dry before re-use.

6.2 Environmental precautions

Prevent spillage from entering drains or waterways. If contamination of drains, streams, watercourses, etc. is unavoidable, warn the local water authority.

6.3 Methods and materials for containment and cleaning up

Contain spilled material. For small liquid spills, use absorbent material such as sand, soil, vermiculite and recover into labelled drums that can be sealed for safe disposal. For large liquid spills, recover liquid into labelled containers then absorb remaining liquid and transfer to drums for disposal. Clean area with water and detergent.

Dispose of contaminated materials to approved landfill in accordance with local regulations.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Read the label before use.

Do not apply directly into or onto water.

Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

When applied product avoid inhalation of spray mist/aerosols. Wear protective equipment such as coat/trouser (overalls), boots, gloves and eye protection.

Wash hands and exposed skin with soap and water after handling and before rest or meal breaks.

Do not eat, drink or smoke when using.

Use only outdoors or in well-ventilated area.

Do not use spray equipment contaminated with this product for any other purpose unless first thoroughly cleaned with a suitable cleaning detergent.

7.2 Conditions for safe storage

Store locked up in the closed original packaging out of reach of children and in a dry, cool, well-ventilated area and out of direct sunlight. Keep away from sources of heat, food, drink and animal

feedstuffs.

Storage of 1000 L or more of this product requires an emergency response plan, secondary containment and signage.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

8.1 Control parameters – exposure standards, biological monitoring

Ingredient	TWA (mg/m ³)	STEL (mg/m ³)
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8.2 Engineering controls

Use in well-ventilated area or outdoors.

8.3 Personal protective equipment (PPE)

The following Standards provide general advice regarding safety clothing and equipment:

Respiratory equipment: **AS/NZS 1715**, Protective Gloves: **AS 2161**, Occupational Protective Clothing: **AS/NZS 4501**, Industrial Eye Protection: **AS1336** and **AS/NZS 1337**, Occupational Protective Footwear: **AS/NZS2210**.

Eye/Face Protection: Wear chemical splash goggles if eye contact is possible.

Skin Protection: Wear impervious chemical resistant gloves (e.g. nitrile, butyl), coveralls, socks and chemical resistant footwear. For overhead spray exposure, wear chemical resistant headgear. Ensure all skin areas are covered.

Respirator: Use outdoors in well-ventilated area or use local exhaust ventilation. Where product is being sprayed and a mist could be produced a respirator should be worn. It should be fitted with a cartridge, suitable for solvents/agricultural chemicals.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Brown coloured liquid
Odour	Solvent
Odour threshold	Not known
pH	6.0 – 7.0 (as 1% emulsion in water)
Melting/Freezing Point	No data available
Boiling Point /Range	No data available
Flash point	>93 °C
Flammability (solid, gas)	Not applicable
Vapour Pressure	No data available
Vapour density	No data available
Specific gravity/bulk density	c.a. 1.0 g/cc
Solubility	Forms emulsion in water
Partition Co-efficient n-octanol/water	No data available
Auto-ignition temperature	No data available
Decomposition temperature	No data available
Viscosity	Not applicable

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

This product is unlikely to react or decompose under normal storage conditions.

10.2 Chemical stability

Stable under normal temperatures and pressure for storage and use.

10.3 Conditions to Avoid

Avoid storage in direct sunlight or exposure to heat.

10.4 Incompatible materials and possible hazardous reactions

Oxidising materials.

10.5 Hazardous decomposition products

Fire Decomposition: Smoke, carbon and nitrogen oxides and other unspecified compounds.

10.6 Polymerisation

Not known to occur.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Health hazard information

The product is classified for health hazards according to an assessment of information on product.

11.2 Toxicological information

Acute toxicity:	May be harmful if ingested or in contact with skin or inhaled.
Aspiration hazard:	Product contains petroleum distillates solvent.
Respiratory irritation:	May be slightly irritating.
Skin corrosion/irritation	Not classified as a skin irritant.
Serious eye damage/irritation	Classified as a serious eye irritant.
Respiratory or skin sensitisation	Azadirachtin is identified as a contact sensitiser.
Germ cell mutagenicity:	No ingredients in product identified as presumed or suspected mutagens.
Carcinogenicity	No ingredients in product identified as presumed or suspected carcinogens.
Reproductive toxicity	Neem oil identified as suspected of damaging fertility or the unborn child.
Specific target organ toxicity – single/repeated exposure	Not classified for adverse effects to organs or systems.
Narcotic effects	Product contains no ingredient identified as causing narcotic effects.

11.3 Toxicological data:

Azadirachtin	Oral, LD ₅₀ (rat) >3540 mg/kg bw Inhalation, LC ₅₀ (rat) >2.41 mg/L
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SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxicity

This product is classified as harmful to aquatic life with long lasting effects and harmful to terrestrial vertebrates.

12.2 Environmental Fate

Breakdown in soil and groundwater: DT₅₀ 3 to 44 days.

Bioaccumulation: Low bioaccumulation potential.

Partition coefficient (octanol/water): Log K_{ow} 1.09 azadirachtin

Soil mobility: Product disperses in water.

12.3 Ecotoxicity data:

Azadirachtin	Fish: Catfish LC ₅₀ (96 hr) 52.35 mg/L Honey bees: Neem oil/azadirachtin is of potential concern for honey bees.
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SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Product Disposal

Refer to product label. If possible, dispose of by using according to the label. Otherwise dispose of to an approved landfill in accordance with local regulations.

13.2 Container Disposal

Refer to product label. Do not use packaging for storage of other products. Empty packaging should be disposed of to an approved recycler or crushed and sent to approved landfill.

SECTION 14: TRANSPORT INFORMATION

Road and Rail Transport:

Not classified as Dangerous Good Class according to NZS5433 Transport of Dangerous Goods on Land

Marine Transport (IMO/IMDG):

Not classified as Dangerous Good by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

Air Transport (ICAO/IATA):

Not classified as Dangerous Good by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulation for transport by air.

UN Number:	Non regulated
UN Proper Shipping Name:	
Transport hazard class(es)	
Packing Group:	III
HAZCHEM:	3Z
Special Precautions for User:	-
IMDG Marine pollutant:	--
Transport in Bulk:	-

SECTION 15: REGULATORY INFORMATION

15.1 HSNO Act 1996

Hazardous substance according to Hazardous Substances (Classification) Notice 2017.

Approved substance number: HSR007949

Hazardous classifications: Eye irritation Category 2, Skin sensitisation Category 1, Reproductive toxicity Category 2, Hazardous to terrestrial vertebrates, Hazardous to the aquatic environment chronic Category 3.

Controls: Refer to control on www.epa.govt.nz for complete wording for variation Controls.

The maximum application rate shall be 5 L product/ha (equivalent to 0.05 kg azadirachtin/ha and 1.95 kg neem oil /ha) with a maximum of 4 applications per year

Additional information:	Safety Data Sheet:	Any quantity
	Restricted to workplace only:	No
	Quantity that requires management in accordance with HSW HS Regulations:	1000 L
	Quantity for secondary containment and emergency response plan:	1000 L
	Quantity for signage:	1000 L

Label requirements;

- Do not apply directly onto or into water.
- Take all reasonable steps to ensure that the substance does not cause any significant adverse effects to the environment beyond the application area.

Refer to HS Notices (www.epa.govt.nz) and HSW HS Regulations (www.worksafe.govt.nz)

15.2 ACVM Act 1997

Registration number: P9791 BioNeem

Refer to www.foodsafety.govt.nz for registration conditions.

SECTION 16: OTHER INFORMATION

16.1 Date of preparation or last revision of SDS

SDS issued	21 st July 2022
SDS supersedes	9 th September 2021
Reason issued	Change neem oil extract CAS No

16.2 ABBREVIATIONS

ADI	Acceptable Daily Intakes
CAS number	Chemical Abstracts Service Registry Number
CCID	Chemical Classification Identification Database
EPA	Environmental Protection Authority
ErC₅₀	Half maximal Effective Concentration
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
Hazchem Code	Emergency action code of numbers and letters that provide information to emergency services especially firefighters
HSNO	Hazardous Substances and New Organisms
HS	Health and Safety
HSR	Hazardous Substances Register
IARC	International Agency for Research on Cancer
LC₅₀	Median Lethal Concentration
LD₅₀	Median Lethal Dose
SDS	Safety Data Sheets
NOAEL	No Observable Adverse Effect Level
NOEL	No Observable Effect Level
NOS	Not otherwise specified
STEL	Short Term Exposure Limit
SWA	Safety Work Australia
TWA	Time-Weighted Average
UN Number	United Nations Number

16.3 REFERENCES

EPA CCID and Approved Substance databases
PPDB- Pesticides Properties DataBase

16.4 OTHER

BioNeem™ is a trademark of Grosafe Chemicals Ltd

21 July 2022

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End of Safety Data Sheet