

CLARITY

1.0 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

1.1 Product identifier

Product name CLARITY

1.2 Uses and advised against

Recommended use BACTERIAL CONTROL AGENT AND BIO-FERTILISER

1.3 Details of the supplier of the product

Supplier Grochem (AgriNova New Zealand Limited)

Company no. 9429036821501

Address 15 Sunlight Grove, Porirua, New Zealand

Telephone +64 4 237 0905

Facsimile +64 4 237 0906

Email grochem@grochem.com

Website www.grochem.com

1.4 Emergency telephone number(s)

Emergency New Zealand
0800 CHEMCALL - 24 hours
(0800 243 6225)

Australia
1800 127 406

Other locations
+64 4 917 9888

or The National Poisons Centre
0800 POISON
(0800 764 766)

1.5 Date of preparation

Date of preparation 02 September 2019

2.0 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

THIS MATERIAL IS HAZARDOUS ACCORDING TO CRITERIA OF EPA NEW ZEALAND.

HSNO approval code HSR008016

Dangerous goods classification Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

Dangerous goods class -

2.2 GHS label elements

Signal word -

Hazard classification(s) 9.1D Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal action (H402). Potential sensitiser.

Hazard statement(s) H402 Harmful to aquatic life.

Prevention precautionary statement(s)	P102	Keep out of reach of children.
	P103	Read label before use.
	P273	Avoid release to the environment.
Response precautionary statement(s)	Not allocated	
Storage precautionary statement(s)	Not allocated	
Disposal precautionary statement(s)	P501	Dispose of contents/container in accordance with local, regional, national and international regulations.

3.0 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances/mixtures

Chemical entity	CAS number	Proportion
Bacillus amyloliquefaciens (Strain MBI 600)	-	17.14 % (w/w)
Ingredients determined to be non-hazardous		to 100%

4.0 FIRST AID MEASURES

4.1 Description of first aid measures

If poisoning occurs, contact a doctor or Poisons Information Centre (Phone Australia 131 126, New Zealand 0800 764 766).

Inhalation	Remove victim from exposure - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. Seek medical advice if effects persist.
Skin contact	If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running water. If swelling, redness, blistering or irritation occurs seek medical assistance.
Eye contact	If in eyes wash out immediately with water. In all cases of eye contamination, it is a sensible precaution to seek medical advice.
Ingestion	Rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water to drink. Never give anything by the mouth to an unconscious patient. If vomiting occurs give further water. Seek medical advice.
PPE for first aiders	Wear overalls, gloves, safety glasses, respirator. Use with adequate ventilation. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.
Notes to physician	Treat symptomatically.

5.0 FIRE FIGHTING MEASURES

5.1 Hazchem code

Not applicable

5.2 Suitable extinguishing media

If material is involved in a fire use water fog (or if unavailable fine water spray), alcohol resistant foam, standard foam, dry agent (carbon dioxide, dry chemical powder).

5.3 Specific hazards

Combustible material.

5.4 Firefighting further advice

Not applicable

6.0 ACCIDENTAL RELEASE MEASURES

6.1 Small spills

Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapours or dust. Wipe up with absorbent (clean rag or paper towels). Collect and seal in properly labelled containers or drums for disposal.

6.2 Large spills

Clear area of all unprotected personnel. Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination and the inhalation of dust. Work up wind or increase ventilation. Cover with damp absorbent (inert material, sand or soil). Sweep or vacuum up but avoid generating dust. Collect and seal in properly labelled containers or drums for disposal. If contamination of crops, sewers or waterways has occurred advise local emergency services.

6.3 Dangerous goods - Initial emergency response guide no.

Not applicable

7.0 HANDLING AND STORAGE

7.1 Handling

Handling practices

Wear appropriate PPE as detailed in section 8. Avoid eye contact and repeated or prolonged skin contact. Avoid inhalation of dust. Clarity and seeds treated with Clarity must not be applied directly onto or into water.

7.2 Storage

Site requirements

Store in a cool (5-25°C) dry, well-ventilated place and out of direct sunlight. Store away from foodstuffs. Store away from incompatible materials described in Section 10. Store away from sources of heat and/or ignition. Keep container standing upright. Keep containers closed when not in use - check regularly for spills.

8.0 EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 National occupational exposure limits

Workplace exposure guidelines

No value assigned for this specific material by WorkSafe New Zealand.

8.2 Biological limit values

Biological limit values

As per the WorkSafe New Zealand the ingredients in this material do not have a Biological Limit Allocated.

8.3 Engineering controls

Exposure control methods

Natural ventilation should be adequate under normal use conditions. Wear appropriate PPE and avoid contact.

8.4 Personal Protective Equipment (PPE)

Detail specifications for equipment

Personal protective equipment (PPE) must be suitable for the nature of the work and any hazard associated with the work as identified by the risk assessment conducted.

Wear overalls (or long-sleeved shirt, long pants and shoes worn with socks) gloves, safety glasses. A respirator must be worn when opening Clarity packaging, treating seeds or spraying with Clarity, opening bags of seeds with Clarity and/or filling seed sowing machines with seeds treated using Clarity.

Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

Keep away from food, drink and animal feeding stuffs. When using do not eat, drink or smoke. Wash hands prior to eating, drinking or smoking. Avoid contact with clothing. Avoid eye contact and repeated or prolonged skin contact. Avoid inhalation of dust. Ensure that eyewash stations and safety showers are close to the workstation location.



9.0 PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Form	Powder
Colour	Beige
Odour	Musty
Solubility	Disperses
Flash point (°C)	Non flammable
Boiling point/range (°C)	N/A
pH	N/A

N/A: Not applicable

10.0 STABILITY AND REACTIVITY

10.1 Chemical stability

This material is thermally stable when stored and used as directed.

10.2 Conditions to avoid

Elevated temperatures and sources of ignition.

10.3 Incompatible materials

Biocides and antimicrobial compounds.

10.4 Hazardous decomposition products

Oxides of carbon and nitrogen, smoke and other toxic fumes.

10.5 Hazardous reactions

No known hazardous reactions.

11.0 TOXICOLOGICAL INFORMATION

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

11.1 Acute effects

Inhalation	Material may be an irritant to mucous membranes and respiratory tract.
Skin contact	Contact with skin may result in irritation.
Ingestion	Swallowing can result in nausea, vomiting and irritation of the gastrointestinal tract.
Eye contact	May be an eye irritant. Exposure to the dust may cause discomfort due to particulate nature. May cause physical irritation to the eyes.

11.2 Acute toxicity

Inhalation	This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): LC50 > 5.0 mg/L
Skin contact	This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >5,000 mg/Kg bw
Ingestion	This material has been classified as non-hazardous. Acute toxicity estimate (based on ingredients): >5,000 mg/Kg bw
Corrosion/irritancy	Eye: this material has been classified as not corrosive or irritating to eyes. Skin: this material has been classified as not corrosive or irritating to skin.
Sensitisation	Inhalation: this material has been classified as not a respiratory sensitiser. Skin: this material has been classified as not a skin sensitiser.
Aspiration hazard	This material has been classified as non-hazardous.
Specific target organ toxicity (single exposure)	This material has been classified as non-hazardous.

11.3 Chronic toxicity

Mutagenicity	This material has been classified as non-hazardous.
Carcinogenicity	This material has been classified as non-hazardous.
Reproductive toxicity (including via lactation)	This material has been classified as non-hazardous.
Specific target organ toxicity (repeat exposure)	This material has been classified as non-hazardous.

12.0 ECOLOGICAL INFORMATION

Avoid contaminating waterways.

12.1 Acute aquatic hazard

9.1D - Substances that are slightly harmful to the aquatic environment or are otherwise designed for biocidal action. Acute toxicity estimate (based on ingredients): 10 - 100 mg/L

12.2 Long-term aquatic hazard

This material has been classified as non-hazardous. Non-rapidly or rapidly degradable substance for which there are adequate chronic toxicity data available OR in the absence of chronic toxicity data, Acute toxicity estimate (based on ingredients): >100 mg/L, where the substance is not rapidly degradable and/or BCF < 500 and/or log Kow < 4.

12.3 Ecotoxicity in the soil environment

This material has been classified as non-hazardous.

12.4 Ecotoxicity to terrestrial vertebrates

This material has been classified as non-hazardous.

12.5 Ecotoxicity to terrestrial invertebrates

This material has been classified as non-hazardous.

12.6 Ecotoxicity

No information available.

12.7 Persistence and degradability

No information available.

12.8 Bioaccumulative potential

No information available.

12.9 Mobility

No information available.

13.0 DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods****Waste disposal**

Persons conducting disposal, recycling or reclamation activities should ensure that appropriate personal protection equipment is used, see "Section 8. Exposure Controls and Personal Protection" of this SDS. Dispose of in accordance with the disposal requirements for toxic substances (local, regional, national and international regulations).

14.0 TRANSPORT INFORMATION**14.1 Road and rail transport**

Not classified as Dangerous Goods by the criteria of the "Australian Code for the Transport of Dangerous Goods by Road & Rail" and the "New Zealand NZS5433: Transport of Dangerous Goods on Land".

14.2 Marine transport

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

14.3 Air transport

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

15.0 REGULATORY INFORMATION**15.1 Regulatory status**

Registered Pursuant to the ACVM Act 1997 P7957. See www.foodsafety.govt.nz for registration conditions.

Approved Pursuant to the HSNO Act 1996 HSR008016. See www.epa.govt.nz for approval conditions.

All components of this product are listed on or exempt from the New Zealand Inventory of Chemical (NZIoC).

15.2 Trigger quantities

Certified handler	No
Location test certificate	No
Fire extinguishers	No
Signage	Yes (10,000kg)

Emergency response Yes (10,000kg)

Hazardous atmosphere zone No

16.0 OTHER INFORMATION

Revision due 02 September 2024

Glossary

ACVM Agricultural Compounds and Veterinary Medicines

CAS Chemical Abstract Services number (used to identify chemical compounds)

EEL Environmental Exposure Limit.

HSNO Hazardous Substances and New Organisms (legislation 1996)

LD50 Lethal Dose fatal to 50% of test animals/organisms

PPE Personal Protective Equipment.

This information was prepared in good faith from the best information available at the time of issue. It is based on the present level of research and to this extent we believe it is accurate. However, no guarantee of accuracy is made or implied and since conditions of use are beyond our control, all information relevant to usage is offered without warranty. The manufacturer will not be held responsible for any unauthorised use of this information or for any modified or altered versions.

If you are an employer it is your duty to tell your employees, and any others that may be affected, of any hazards described in this sheet and of any precautions that should be taken.

Safety Data Sheets are updated frequently. Please ensure you have a current copy.