


1: Identification of the Substance and Supplier

Product Name	GNARLY
Recommended Use	Adjuvant
Suppliers Details	Orion AgriScience Ltd Unit 1, 15 Sir Gil Simpson Drive, Harewood, Christchurch, 8053 PO Box 39 071, Harewood, Christchurch, 8545
Web Address	www.orionagriscience.co.nz
Email Address	orders@orionagriscience.co.nz
Telephone Number	(03) 928 2386 (office hours), 0800 674 6627 (free phone)
Emergency Telephone	0800 CHEMCALL (0800 243 622) (24 hours)
National Poison Centre	0800 POISON (0800 764 766) (24 hours)
Date of Issue/Revision	March 2025

2: Hazards Identification

Hazard Pictograms	
Signal Words	Warning
Hazard Classes:	Hazard Statements:
Acute Toxicity Inhalation (Cat. 4)	H332 Harmful if inhaled
Eye Irritation (Cat. 2)	H319 Causes serious eye irritation
Hazardous to the aquatic environment chronic (Cat. 3)	H412 Harmful to aquatic life with long lasting effects
Precautionary Statements:	
Prevention	P101 If medical advice is needed, have product container or label at hand P102 Keep out of reach of children P103 Read carefully and follow all instructions P261 Avoid breathing dust/fume/gas/mist/vapours/spray P271 Use only outdoors or in a well ventilated area P264 Wash hands thoroughly after handling P280 Wear eye protection / face protection Read label before use. Avoid contact with eyes and skin. Do not breathe in the spray mist. When mixing or applying, wear personal protection as described in section 8. Take all reasonable steps to ensure that this product does not cause any significant adverse effects to the environment beyond the application area. Do not apply directly into or onto water.
Response	P304+P340 IF INHALED: Move person to fresh air and keep comfortable for breathing P312 Call a POISON CENTRE/doctor if you feel unwell P301+P317 IF SWALLOWED: Get medical help P302+P317 IF ON SKIN: Get medical help P332+P317 If skin irritation occurs get medical help P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing P337+P313 If eye irritation persists: Get medical advice/attention First aid measures described in section 4. Contain and collect spillage for disposal. In an emergency call 111, Police or Fire Brigade. For specialist advice in an emergency only, call 0800 CHEMCALL (0800 243 6225) (24 hrs).

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Storage	Keep out of reach of children.
Disposal	P501 Dispose of contents by using it in accordance with this label. Dispose of the container via AgRecovery after triple rinsing (use the rinsate for spraying).

3: Composition/ Information on Ingredients

Ingredient	CAS No	Content (% w/v)
Polyalkyleneoxide modified heptamethyltrisiloxane	67674-67-3	<10
Secondary alcohol ethoxylate	Proprietary	<10
Other ingredients	Proprietary	Remainder

4: First Aid Measures

If medical advice is needed, have product container or label at hand. For advice call the National Poisons Centre or a Doctor

Ingestion:	Seek medical advice if feeling unwell
Skin Contact:	Wash with plenty of soap and water. Seek medical advice if irritation occurs.
Eye Contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if easy to do so. Continue rinsing. Seek medical advice if irritation persists.
Inhalation:	Remove to fresh air and keep at rest in a position comfortable for breathing. Seek medical advice immediately.
Workplace Facilities:	Hand wash facility. Eye wash facility
Advice to Doctor:	No specific antidote. Treat symptomatically
National Poison Centre	0800 POISON (0800 764 766) (24 hours)

Symptoms of Exposure which could occur if this material is not handled in accordance with instructions:

Ingestion:	No data available
Skin Contact:	Irritation
Eye Contact:	Serious irritation
Inhalation:	No data available

5: Fire-Fighting Measures

Fire/Explosion Hazard	Non-Flammable
HAZCHEM Code	Not applicable
ERP Guide No	47
Extinguishing Media	Water spray, foam, dry chemical or CO2. Avoid water jet.
Fire Fighting Instructions	During a fire, toxic fumes may be emitted. Wear self-contained breathing apparatus. Contain runoff.
Specific Hazards Arising from Fire	No data available

6: Accidental Release Measures

Personal Precautions	Caution: Floors may be slippery if wet. Wear personal protective clothing and equipment as described in section 8. Exclude non-essential people from the area.
Environmental Precautions	Prevent further spillage or leakage. Prevent material from entering drains, waterways, etc.
Clean Up	Absorb spillage with inert material such as spill kit, sand or cat litter. Collect and place in a sealable container for disposal. Wash down affected area with water and detergent. Absorb and collect washings for disposal. Dispose of safely to a suitable landfill.

7: Handling and Storage

Storage:	Keep out of reach of children. Store in the original tightly closed container in a secure area.
Handling and Use:	Keep out of reach of children. Refer to Prevention statements in section 2 above. Keep people and animals away from the area while spraying and for the duration of the REI.
REI	Until spray has dried

8: Exposure Controls / Personal Protection

Tolerable Exposure Limit	None established
Workplace Exposure Standards	None established
Engineering Controls	Select spray application equipment to minimize exposure to operator and bystanders
Personal Protection:	
Eye	Safety glasses/goggles when mixing or applying
Skin	Cotton overalls snugly fitting at the neck, wrist and ankle, boots and waterproof gloves when mixing and applying
Respiratory	Not required where spray mist is not inhaled. Otherwise, respirator (organic vapour and particulate matter) is required.

Clean protective equipment after use

9: Physical and Chemical Properties

Appearance	Amber Liquid
Odour	Slight
Odour Threshold	Does not apply
pH	Does not apply
Melting Point/Freezing Point	Does not apply
Boiling Point	> 150°C
Flash Point	> 100°C
Flammability	Does not apply
Upper/Lower Flammability Limits	Does not apply
Vapour Pressure	Does not apply
Vapour Density	> 1
Density	0.90 g/mL (approx.)
Solubility in Water	Dispersible
Partition Coefficient: n-octanol/water	See section 12
Auto ignition Temperature	Does not apply
Decomposition Temperature	Does not apply
Kinematic Viscosity	Does not apply
Particle characteristics	Does not apply

10: Stability and Reactivity

Stability	Stable under normal conditions
Hazardous Reactions	None Expected
Incompatibility	None Known
Hazardous Decomposition Products	None Known

11: Toxicological Information

This section describes effects which could occur if this material is not handled in accordance with this data sheet and label instructions

Acute Oral Toxicity	LD50 > 2000 mg/kg
Acute Dermal Toxicity	LD50 > 2000 mg/kg
Acute Inhalation Toxicity	LD50 > 1 mg/L
Skin corrosion/irritation	Irritation
Serious eye damage/Eye irritation	Serious irritation
Respiratory or skin sensitisation	Information not available
Germ cell mutagenicity	Information not available
Carcinogenicity	Information not available

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Reproductive Toxicity	Information not available
Specific Organ Toxicity – Single exposure	Information not available
Specific Organ Toxicity – Repeated exposure	Information not available
Aspiration hazard	Information not available

12: Ecotoxicity Information

This section describes effects which could occur if this material is not handled in accordance with this data sheet and label instructions.

The following information is presented in respect of the active ingredient:

Ecotoxicity	<ul style="list-style-type: none">Acute Oral LD50 (Rat) >5000 mg/kgLC50 (96 hr) (Fish) >10 mg/lEC50 (48 hr) (Crustacea) >10 mg/lEC50 (72 hr) (Algae) >10 mg/lNon – toxic to bees
Persistence/degradability	No data available
Bioaccumulative Potential	No data available
Soil Mobility	No data available
Environmental Exposure Limit:	None established

13: Disposal Considerations

Product	Dispose of product by using it in accordance with the label. Waste product should be disposed of to a suitable landfill. For disposal of large quantities contact Orion AgriScience Ltd.
Container	Dispose of to a suitable landfill or via AgRecovery. Do not burn. Do not use packaging for any other purpose.

14: Transport Information

Dangerous Goods	
UN Number	Not Applicable – Not dangerous for transport
Proper Shipping Name	Not Applicable – Not dangerous for transport
Class	Not Applicable – Not dangerous for transport
Subsidiary Class	Not Applicable – Not dangerous for transport
Packing Group	Not Applicable – Not dangerous for transport
Additional Information	Not Applicable – Not dangerous for transport
MTQ (Non-Commercial)	Not Applicable – Not dangerous for transport
Passenger Service Vehicle	No restriction

15 Regulatory Information

EPA Approval No	HSR002503
ACVM Registration No	Not required
Qualified Person	Not required
Certified Handler	Not required
Workplace Only	No
Tracking	Not required
Record Keeping	Not required
Site Requirements under EPA Notice and HSWHS Regs:	<ul style="list-style-type: none">A hazardous substance location compliance certificate is not requiredA hazardous area is not required

- Separation distances for class 3 and class 6 substances to protected places and public places is not applicable
- Fire extinguishers are not required
- Signage is required for more than 1000 litres
- An emergency response plan is required for more than 1000 litres
- Secondary containment is required for more than 1000 litres
- Segregation from incompatible substances is not required

Additional Requirements

Refer to NZS 8409:2004 'Management of Agrichemicals', and relevant local and regional council plans

16: Other Information

SDS review date

27 March 2025

Glossary

ADE

Acceptable Daily Exposure – A daily dose, received via any route, below which no adverse effects are expected over a lifetime of exposure

ACVM

Agricultural Compounds and Veterinary Medicines group of the Ministry of Primary Industries

Cat.

GHS category

Ceiling

A concentration that should not be exceeded at any time during any part of the working day

Certified Handler

A qualification issued by a Compliance Certifier to handle and use particularly toxic substances (6.1A and 6.1B)

DT50

Time (days) for 50% reduction in concentration

EC50

Concentration required to produce an effect in 50% of organisms

Environmental Exposure Limit

Maximum concentration limit of a substance in an environmental medium, e.g., water, soil.

EPA Notice

Hazardous Property Controls Notice 2017

ERP Guide

Dangerous Goods – Initial Emergency Response Guide SNZ HB 76:2008

GHS

Globally harmonized system of classification and labelling of chemicals

Hazardous Substance Location

For locations storing hazard substances of certain classes above threshold quantities

Compliance Certificate

Hazardous Area

A designated area designed for the presence of flammable substances - Refer AS/NZS 60079.10.1:2009

HAZCHEM Code

Emergency action code for emergency services

HSWHS Regs

Health and Safety at Work (Hazardous Substances) Regulations 2017

LC50

Concentration that will kill 50% of organisms

LD50

Dose that will kill 50% of organisms

MTQ

Maximum Transport Quantity. The maximum amount of dangerous goods that can be transported by road by the user

Notification

Advance notice given to neighbours and other affected parties, of details of proposed application, and other details as described

Octanol-Water Partition Coefficient

The partition coefficient of a substance between n-octanol and water, used as the Logarithm base 10 form, as an indicator that a substance may bioaccumulate

PDE

Permitted Daily Exposure - A daily dose below which no adverse effects are expected over a lifetime of exposure

Protected Place

Residential properties, schools, hospitals, kindys, factories, shops, warehouses, etc., and other places where people assemble

Public Place

A place frequented by the public, including roads (does not include private property)

Qualified Person

A requirement for the loader, contractor or person applying the product to hold a qualification such as a GROWSAFE Certificate, Unit Standard 21563, etc.

Record Keeping

Includes a spray diary or other record of application

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REI	Restricted Entry Interval – The length of time after application before entry into the treated area is permitted without the use of protective equipment. For indoor environments, this time period commences once ventilation after treatment begins.
Segregation	Certain classes of substances must not be in contact with, and must be stored separately from, certain other classes as specified in HSWHS Regs
Separation Distances	The distances specified in Part 11 and Part 13 of HSWHS Regs between storage and/or use of hazardous substances and protected places and/or public places
Signage	Positioned at entrances to commercial premises providing information on the hazardous substances present
Soil Adsorption Coefficient (Kd)	The ratio of the concentrations of a substance adsorbed onto a solid sorbent to that dissolved in a liquid phase. The higher the value the less mobile the chemical is in soil
Soil Organic Carbon-Water Partitioning Coefficient (Koc)	The ratio of the mass of a chemical that is adsorbed in the soil per unit mass of organic carbon in the soil. The higher the value the less mobile the chemical is in soil
STEL	Short term exposure level – 15 minute time weighted average
Tolerable Exposure Limit	Maximum concentration limit of a substance above which persons must not be exposed
Tracking	For some particularly hazardous substances, a record must be kept of the transport, storage, sale and use of the product
TWA	Time weighted average calculated over an 8 hour working day
Workplace Exposure Standard	An occupational health standard limiting concentrations of specified substances to which persons are exposed
Workplace Only	A product that is restricted to a workplace only and under the supervision of a certified handler

Please Note

Users must ensure that the most up to date version of this safety data sheet is used.

This Safety Data Sheet summarises information on this product, and how to safely handle and use the product. Each user should familiarise themselves with the product label and Safety Data Sheet, and consider the information in the context of how the product will be handled and used, including in conjunction with other products. Orion AgriScience Ltd assumes no responsibility for the accuracy, completeness or suitability of this information. The user is responsible for determining the suitability and accuracy of this information for their particular purposes.

If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.