

1. PRODUCT & COMPANY IDENTIFICATION

Product Identification/Name:	GrassMate
Alternative Name:	100g/L picloram as the amine salt plus 300g/L triclopyr as the butoxyethyl ester in the form of an emulsifiable concentrate.
Product Use:	Herbicide
Company Identification:	Rainbow & Brown Limited 68A Tallyho Street, Rotorua, New Zealand PO Box 10049, Mail Centre, Rotorua, 3046
Telephone:	+64 7 350 2009
Toll-Free Phone:	0508 299 299
After Hours Emergency	+64 27 498 2574
National Poisons Centre	0800 764 766
CHEMCALL Emergency Response	0800 CHEMCALL 24,7 365 days a year
Website:	www.rainbowbrown.co.nz
Date of Issue:	18 January 2019 – Version 1.0
Latest Revision Date:	24 October 2024 – Version 2.1

2. HAZARD IDENTIFICATION

This substance is hazardous according to the EPA Hazardous Substances (Classification) Notice 2020.

EPA Approval No:	HSR002485
Pictograms:	
Signal Word:	WARNING

GHS Classification & Category	HSNO Classification	Hazard Code	Hazard Statement
Acute oral toxicity Category 4	6.1D (oral)	H302	Harmful if swallowed.
Eye Irritation Category 2	6.4A	H319	Causes serious eye irritation.
Skin sensitisation Category 1	6.5B	H317	May cause an allergic skin reaction.

Specific target organ toxicity (repeated exposure) Category 2	6.9B (oral)	H373	May cause damage to organs (liver, kidney, blood) from prolonged or repeated exposure.
Hazardous to the aquatic environment (acute) Category 1	9.1A	H400	Very toxic to aquatic life.
Hazardous to the aquatic environment (chronic) Category 1	9.1B	H410	Very toxic to aquatic life with long lasting effects.
Hazardous to soil organisms	9.2A	H421	Very toxic to the soil environment.
Hazardous to terrestrial vertebrates	9.3C	H433	Harmful to terrestrial vertebrates.

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P264	Wash hands and face thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P272	Contaminated work clothing should not be allowed out of the workplace.
P260	Do not breathe mist/vapours/spray.
P273	Avoid release to the environment.
Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P301 + P312	IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell.
P330	Rinse mouth.
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.
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 reuse.
P314	Get medical advice/attention if you feel unwell.
P391	Collect spillage.
Storage Code	Storage Statement
P405	Store locked up.

Disposal Code	Disposal Statement
P501	In accordance with the EPA Hazardous Substances (Disposal) Notice 2017. Refer to Section 13 of this SDS.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS Number	Concentration (%w/w)
Triclopyr Butoxyethyl Ester	64700-56-7	30%
Picloram (as amine salt)	1918-02-1	10%
Diethylene glycol monobutyl ether	112-34-5	40%
Ingredients not contributing to hazard		Balance

This is a commercial product whose exact ratio of components may vary slightly. Minor quantities of other non-hazardous ingredients are also possible.

4. FIRST-AID MEASURES

Eye Contact:	Immediately flush the contaminated eye(s) with lukewarm, gently flowing water for 15 minutes while holding the eyelid(s) open. Take care not to rinse contaminated water into the unaffected eye or onto the face. Remove contact lenses after first 5 minutes if present and easy to do, the continue rinsing. Get medical advice/assistance if irritation persists.
Skin:	Remove contaminated clothing. Wash gently and thoroughly with plenty of water (use non-abrasive soap if necessary). Do not scrub the skin. Get medical advice/attention if irritation occurs. Wash contaminated clothing before re-use.
Ingestion:	If swallowed, do NOT induce vomiting. Rinse mouth with water. Contact a Poisons Information Centre or call a doctor.
Inhalation:	No first aid measures normally required. However, if inhalation has occurred, and irritation has developed, remove to fresh air, and observe until recovered. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.
General:	Call the National Poisons Centre (0800 POISON, 0800 764 766) for advice if you feel unwell or have been exposed and are concerned. Have product label or SDS at hand. No specific antidote. Ingestion may cause kidney or liver damage. Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point:	>110°C
Flammable Limits:	Not flammable or combustible. Lower flammability limit: Not applicable. Upper flammability limit: Not applicable.
Extinguishing Media:	Water spray, dry chemical, alcohol-resistant foam, CO ₂ Use extinguishing media suited to surrounding materials.
Fire & Explosion Hazards:	There is no risk of an explosion from this product under normal circumstances if it is involved in a fire. Toxic fumes and irritating vapours may be produced in a fire. Containers may burst when exposed to high temperatures due to pressure build-up.
Fire Fighting Equipment:	Wear personal protection equipment includes SCBA.
Fire Fighting Instructions:	Do not allow runoff into drains.
Hazchem Code:	3Z

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Clear area of all unprotected personnel. Keep people upwind of fire. Use appropriate protective clothing and equipment.
Spills:	Ensure there is appropriate and adequate personal protective equipment, trained personnel and clean-up materials for the management of accidental release. Avoid release to the environment. Contain spill. Absorb with inert material such as clay or sand. Shovel or sweep up and place into a container for disposal. Do not use water for clean-up unless it can be entirely contained and absorbed for disposal. Label disposal containers. Dispose of waste in accordance with Section 13.

7. HANDLING AND STORAGE

Label:	Must be under the control of a suitably qualified handler when mixed, loaded or applied in a wide dispersive manner (i.e. aerial/boom spray), or when applied by a commercial contractor.
Handling:	Read label before use. Keep exposure to this product to a minimum, and minimise the quantities kept in work areas. Some liquid preparations settle or separate on standing and may require stirring before use. Check packaging - there may be further storage instructions on the label. Refer to Section 8 of this SDS for details of personal protective measures, and make sure that those measures are followed.

	The measures detailed below under "Storage" should be followed during handling to minimise risks to persons using the product in the workplace. Thoroughly launder protective clothing before storage or re-use. Advise laundry of nature of contamination when sending contaminated clothing to laundry.
Storage:	Keep out of reach of children. Store in the original container, tightly closed and in a locked dry, cool, well-ventilated area, away from foodstuffs. Storage must be in accordance with the current version of NZS 8409 Management of Agrichemicals. Storage of 100 L or more requires specific storage requirements for signage, secondary containment and an emergency response plan. Do not use on food crops. Avoid contamination of seeds, fertilisers and other pesticides.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

Exposure Guidelines:	Ingredient	CAS Number	TWA (mg/m³)	STEL (mg/m³)
	Triclopyr Butoxyethyl Ester	64700-56-7	Not set	Not set
	Picloram (as amine salt)	1918-02-1	10mg/m ³	Not set
	Diethylene glycol monobutyl ether	112-34-5	Not set	Not set
	WorkSafe's 13th edition of WES and BEI values, published April 2022. The WES TWA exposure value is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5-day working week. The STEL (Short Term Exposure Limit) is an exposure value that may be equalled (but should not be exceeded) for no longer than 15 minutes and should not be repeated more than 4 times per day. There should be at least 60 minutes between successive exposures at the STEL. The term "peak" is used when the TWA limit, because of the rapid action of the substance, should never be exceeded, even briefly.			
Engineering Controls:	No special engineering controls or ventilation requirements are normally necessary for this product. However, make sure that the work environment remains clean, and that vapours and spray mists are minimised.			
Personal Protection:				
Respiratory Protection:	Usually, no respirator is necessary when using this product. However, if you have any doubts refer to standard AS/NZ 1715 for appropriate equipment. If exposed to unusually high mist/spray concentrations, then use an approved respirator with organic cartridge.			
Skin Protection:	Wear protective clothing such as impervious gloves, waterproof hat, coat and trousers when using. Use impervious elbow-length gloves and facial protection when handling this product. See below for suitable material types. Protective clothing be made from the following materials: rubber, PVC. Refer to Standard AS 2161, AS2919 and AS.NZ2210.			

Eye Protection:	Protective glasses or goggles should be worn when this product is being used. Emergency eye wash facilities are also recommended in an area close to where this product is being used. Refer to standard AS.NZ1337.
Dust:	N/A
General advice:	Eyebaths or eyewash stations and safety deluge showers should be provided near to where this product is being used. Do not eat, drink or smoke while using. Wash hands and exposed skin thoroughly with soap and water before meals and after work. Wash protective clothing daily after work. Launder contaminated clothing separately from household laundry.

9. PHYSICAL & CHEMICAL PROPERTIES

Appearance:	Light amber liquid
Odour:	Mild ester odour
Odour Threshold:	Not determined
pH:	6.5-8 (5% solution)
Boiling Point:	Approx. 200°C
Melting Point:	Not available
Freezing Point:	Not available
Flash Point:	>110°C
Flammability:	Not flammable or combustible
Upper/Lower Flammability or Exposure Limits:	Not applicable
Vapour Pressure:	Not determined for the product. Triclopyr ingredient: 3.6×10^{-6} Pa @ 25°C Picloram ingredient: 6.16×10^{-7} Pa @ 25°C
Vapour Density:	Not determined
Specific Gravity:	1.125 g/mL @ 20°C
Water Solubility:	Emulsifiable
Partition Coefficient:	Not determined
Auto-ignition Temperature:	Not determined
Decomposition Temperature:	Not available
Kinematic Viscosity:	Not determined
Particle Characteristics:	Property does not apply

10. STABILITY & REACTIVITY

Stability:	Stable under normal conditions.
Reactivity:	This product is unlikely to react or decompose under normal storage conditions. However, if you have any doubts, contact the supplier for advice on shelf-life.
Conditions to Avoid:	No special requirements.
Incompatibility:	Avoid strong oxidisers, strong acids and strong bases. Keep away from food, feedstuffs, seeds and fertilisers.
Hazardous Decomposition Products:	Oxides of carbon and nitrogen, hydrogen chloride gas, may be formed.
Hazardous Polymerisation:	This will not occur.

11. TOXOLOGICAL INFORMATION

Acute toxicity	LD ₅₀ approx. 1600 mg/kg, by calculation. Harmful if swallowed.
Skin corrosion/irritation:	Product classified as a mild skin irritant.
Eye damage/irritation:	Irritating to eyes.
Respiratory/skin sensitisation:	Skin sensitiser. May cause an allergic skin reaction on prolonged or repeated exposure.
Mutagenicity:	Product is not classified for mutagenicity.
Carcinogenicity:	Product is not classified for carcinogenicity.
Reproductive Toxicity:	Product is not classified for reproductive or developmental effects.
Specific Target Organ Toxicity:	May cause damage to kidneys and/or liver via ingestion.
Aspiration hazard:	No aspiration hazard identified.

12. ECOLOGICAL INFORMATION

Aquatic environment:	LC/EC ₅₀ < 1 mg/L Product is very toxic in the aquatic environment and with long-lasting effects. Avoid losses to the environment wherever possible.
Soil environment:	Product is very toxic in the soil environment. Product is used as herbicide. Soil DT ₅₀ > 30 days.
Terrestrial vertebrates:	Product is toxic to terrestrial vertebrates.
Terrestrial invertebrates:	No known toxicity.
Persistence and biodegradability:	Not readily biodegradable.
Mobility in soil:	Picloram is very mobile and persistent.

13. DISPOSAL CONSIDERATIONS

Disposal Method:	Avoid contamination of any water supply with the product or empty container. Dispose of this product only by using it according to the label, or at an approved landfill, or other approved facility. Avoid contamination of any water supply with the product or empty container.
Container Disposal:	Ensure the container is completely empty. Triple rinse with water and add rinsate to the spray tank. Burn the rinsed container if circumstances, especially wind direction, permit. Otherwise, crush and bury in a suitable landfill or recycle it by taking it to the nearest AgRecovery approved drop-off point. 

14. TRANSPORT INFORMATION

This product is classified as a Dangerous Good for transport in NZ; NZS 5433:2012

Dangerous Goods Classification:	3082
Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Triclopyr, Picloram)
Class:	9
UN Number:	3082
Packaging group:	III
Hazchem Code	3Z
Marine Pollutant:	Yes
IMDG EMS	F-A, S-F

15. REGULATORY INFORMATION

All of the significant ingredients in this formulation are compliant with NICNAS regulations.

ACVM Act 1997 Registration No:	P007417
HSNO Approval No:	HSR002485
Substance description:	Water emulsifiable concentrate containing 300g/L Triclopyr and 100g/L Picloram.
Certified Handler:	Not required
Qualified Handler:	Required - when mixed, loaded or applied in a wide dispersive manner (i.e. aerial/boom spray), or when applied by a commercial contractor.

Tracking:	Not required
Compliance Certificate:	Not required
Quantity that must be secured:	Not required
Location Certificate	Not required
Emergency Response Plan:	100L
Secondary Containment:	100L
Signage:	100L
Fire Extinguishers:	No fire extinguisher requirement specified.
Record-keeping:	Yes, Records of use must be kept when 3L or more is applied within 24 hours in a place where the substance is likely to enter the air or water and leave the application area.
Training requirements:	All workplace personnel handling this substance are required to be trained on the safe handling and PPE requirements for the hazards associated with this substance in accordance with Clause 4.5 of the Health and Safety at Work (Hazardous Substances) Regulations 2017. In addition, any person preparing the product for application or applying the product must be a qualified loader, contractor, or person as applicable. Refer to EPA Hazardous Substances (Hazardous Property Controls) Notice 2017 Part 4, Subpart C.
Other regulatory requirements:	The substance must not be applied onto or into water. Refer to www.epa.govt.nz for HSR002485 controls and Hazardous Substances Property Controls) Notice 2017.

16. OTHER INFORMATION

Glossary

AEL	Acceptable Exposure Limit
DT₅₀	Time (days) for 50% loss
EC₅₀	Median effective concentration
EEL	Environmental Exposure Limit
EPA	Environment Protection Authority
GHS	Globally Harmonised System
HSNO	Hazardous Substances & New Organisms Act
Koc	Organic carbon partition coefficient
LFL	Lower Flammability Limit
LC₅₀	Lethal Concentration in air or water for 50% of test organisms
LD₅₀	Lethal Dose for 50% of test organisms

NOEL	No Observable Effect Level
OSHA	Occupational Safety & Health Administration (USA)
OSH or WorkSafe	WorkSafe New Zealand
PEL	Permissible Exposure Level
Pow	Octanol water partition coefficient (ratio of concentration of a chemical in octanol and water at equilibrium and at a specified temp.)
pH	Measure of acidity/alkalinity of a substance on a 1-14 scale (1=strong acid, 14 = strongly alkali)
STEL	Short Term Exposure Limit
TEL	Tolerable Exposure Limit
TLV	Threshold Limit Value – an exposure limit set by a competent authority
TWA	Time Weighted Average – average concentration of a chemical in air over a total exposure time (usually 8 hours)
UFL	Upper Flammability Limit
WES	Workplace Exposure Standard – set by WorkSafe NZ

The data in this Safety Data Sheet relates only to this product alone, and not to its use in combination with other substances or products. In such circumstances, assuming the combination is permitted (refer to product labels, and contact manufacturer if in doubt), be guided by the most hazardous of the substances involved and observe the more stringent of all hazard controls applicable to the products used.

Date of Safety Data Sheet: 24 October 2024 – Version 2.1

Reason for Revision: Review and load into new SDS format with new legislative requirements.

Revision 2.0 – 15 January 2024 – 5 yearly Review.

Version 1.0 – 18 January 2019 - SDS issued

Further Information: Rainbow & Brown Limited
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