

1. PRODUCT & COMPANY IDENTIFICATION

Product Name	Ranger
Recommended Use	Herbicide
Suppliers Details	Rainbow & Brown Limited 68 & 68A Tallyho Street, Rotorua, New Zealand PO Box 10049, Mail Centre, Rotorua, 3046
Web Address	www.rainbowbrown.co.nz
Email address	mail@rainbowbrown.co.nz
Telephone	(07) 350 2009 (office hours), 0508 299 299 (free phone, office hours)
Emergency Telephone	0800 CHEMCALL (0800 243 622) (24 hours)
National Poison Centre	0800 POISON (0800 764 766) (24 hours)
Date of Issue	27 November 2018
Latest Revision Date	19 March 2026
Expiry Date	19 March 2031

2. HAZARD IDENTIFICATION

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

EPA Approval No	HSR007774
Hazard Pictograms	
Signal Word	WARNING

GHS Classification & Category	HSNO Classification	Hazard Code	Hazard Statement
Hazardous to the aquatic environment (acute) Category 1	9.1A	H400	Very toxic to aquatic life
Hazardous to the aquatic environment (chronic) Category 1	9.1A	H410	Very toxic to aquatic life with long lasting effects
Hazardous to soil organisms	9.2A	H421	Very toxic to soil environment

Prevention Code	Prevention Statement
P103	Read label before use
P273	Avoid release to the environment.

Avoid contact with eyes and skin. Do not breathe in spray mist. When 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 Code	Response Statement
P391	Collect spillage
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).	

Storage Code	Storage Statement
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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)
Thifensulfuron-methyl	79277-27-3	75%
Non specified non-hazardous ingredients	NA (Mixture)	To 100%

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	Rinse cautiously with water for several minutes. Remove contact lenses, if easy to do so. Continue rinsing. Seek medical advice if irritation persists.
Skin	If on skin, remove contaminated clothing and wash affected skin areas. DO NOT SCRUB SKIN.
Ingestion	If swallowed do NOT induce vomiting. If you feel unwell, contact the National Poisons Centre (0800 764 766) or a doctor immediately.
Inhalation	If dust is inhaled, remove to fresh air. If effects persist seek medical attention.

Workplace Facilities	Hand wash facility. Eye wash facility.
Advice to Doctor	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:

Eye Contact	No data available
Skin	No data available
Ingestion	No data available
Inhalation	No data available

5. FIRE-FIGHTING MEASURES

Extinguishing Media	Water spray, foam, CO ₂ or dry chemical
Fire & Explosion Hazards	Not a fire or explosion hazard
Fire Fighting Instructions	Wear full protective clothing and self-contained breathing apparatus. Keep upwind. Contain runoff. Addition of water may increase contamination area. If conditions permit, allow fire to burn itself out. Do not allow runoff to drains.
Hazchem Code	2X
ERP Guide No	47

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Clear area of all unprotected personnel. Keep unnecessary and unprotected personnel from entering area. Use appropriate protective clothing and equipment.
Environmental Precautions	Prevent further spillage or leakage. Prevent material from entering drains, waterways, etc.
Clean Up	Collect spillage. Wear appropriate protective clothing and prevent material from entering waterways. Shovel or sweep up and dispose of waste in an approved landfill. Recover or absorb liquid spills and dispose of to an approved landfill.

7. HANDLING AND STORAGE

Storage	Keep out of reach of children. Store in the original tightly closed container, in a secure place away from feed or foodstuffs. Stores containing more than 100kg of this product require signage and an emergency response plan. Storage must be in accordance with NZS 8409 Management of Agrichemicals. When stored appropriately this product should show no significant degradation for 2 years from the date of manufacture. Contact Rainbow & Brown for information about the use of the product that is older than this.
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Handling and Use	Qualified handler when applied in a wide dispersive manner use of this product must be under the control of a person qualified in accordance with Part 4, subpart C of the EPA hazardous substances (HPC) Notice 2017.
REI	None specified (Also refer to Section 15).

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

Tolerable Exposure Limit	None established
Workplace Exposure Standards	Recommended TWA of 10mg/3 ³ for dust exposure as a safe guideline
Engineering Controls	Normal room ventilation is sufficient
Personal Protection	
Respiratory	No special precautions are necessary for respiratory protection under normal handling conditions. If exposed to unusually high dust concentrations, then use an approved dust respirator
Skin	Wear overalls and chemical resistant gloves while mixing or during application.
Eye	Wear face shield/goggles while mixing or during application.

Clean protective equipment after use

9. PHYSICAL & CHEMICAL PROPERTIES

Appearance	Light tan granules
Odour	No definitive odour
Odour Threshold	Not determined
pH	6.0 – 9.0 (1% solution)
Melting Point/Freezing Point	Property does not apply
Boiling Point	Property does not apply
Flash Point	Property does not apply
Flammability	Non-flammable or combustible
Upper/Lower Flammability	Property does not apply
Vapour Pressure	1.7 x 10 ⁻⁸ Pa at 25°C (as Thifensulfuron-methyl)
Vapour Density	700 g/cm ³
Relative/Specific Gravity	Property does not apply
Water Solubility	Dispersible
Partition Coefficient: n-octanol/water	Property does not apply
Auto-ignition Temperature	Property does not apply

Decomposition Temperature	Property does not apply
Kinematic Viscosity	Property does not apply
Particle Characteristics	Property does not apply

10. STABILITY & REACTIVITY

Stability	Stable under normal conditions
Hazardous Reactions	Not reactive under normal conditions of use
Incompatibility	Strong oxidizers. Keep away from food, feedstuffs, seeds and fertilisers
Hazardous Decomposition Products	Hazardous polymerisation will not occur

11. TOXOLOGICAL 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 (rats) > 5000 mg/kg
Acute Dermal Toxicity	Not expected to be harmful by skin contact
Acute Inhalation Toxicity	Not expected to be harmful by inhalation under normal conditions of use
Skin corrosion/irritation	Not expected to be a skin irritant
Serious eye damage/eye irritation	Not expected to be a eye irritant
Respiratory or skin sensitisation	Not expected to be a respirator or skin sensitiser
Germ Cell Mutagenicity	Information not available
Carcinogenicity	Information not available
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. ECOLOGICAL 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	Algae EC50 (72h) Selenastrum capricornutum 0.013 mg/L

	Very toxic to aquatic life with long lasting effects. Avoid losses to the environment wherever possible
Persistence & Degradability	Not rapidly biodegradable
Bioaccumulation	No
Mobility in Soil	EC50 (seedlings) 0.000528mg/kg Very toxic to soil environment. Soil DT50 >30 days.
Environmental Exposure Limit	Information is not available

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 Rainbow & Brown Ltd.
Container	Triple rinse empty container and add rinsate to spray tank. Do not burn containers. Crush or puncture and bury in a suitably approved landfill or through Agrecovery recycling service. Do NOT use the container for any other purpose.

14. TRANSPORT INFORMATION

Dangerous Goods	
UN Number	30877
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Thifensulfuron-methyl)
Class	9
Subsidiary Class	N/A
Packing Group	III
Additional Information	Marine Pollutant
MTQ (Non-Commercial)	1000kg
Passenger Service Vehicle	Up to 3kg may be carried on a public passenger vehicle.

15. REGULATORY INFORMATION

ACVM Registration No.	P7668
EPA Approval No	HSR007774
Qualified Person	Not required
Certified Handler	Not required

Workplace Only	No
Location Certificate	Not required
Tracking	Not required
Record Keeping	Not required
Signage	100kg
Emergency Response Plan	100kg
Secondary Containment	100kg
Additional Requirements	Refer to NZS 8409:2004 'Management of Agrichemicals', and relevant local and regional council plans

16. OTHER INFORMATION

SDS review Date	19 March 2026
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Glossary

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

Rainbow & Brown Ltd Safety Data Sheet Disclaimer

This Safety Data Sheet has been prepared by Rainbow & Brown Ltd and summarises information on this product and safe handling procedures. The information is based on data provided to Rainbow & Brown Ltd or obtained from third-party sources and represents the current understanding of appropriate safety and handling precautions at the time of issue.

Users must ensure they are working with the most current version of this SDS and should familiarise themselves with both the product label and this document. Each user should consider this information in the context of their specific handling and use of the product, including when used in conjunction with other products.

While Rainbow & Brown Ltd has exercised due care to include accurate and up-to-date information, no warranty is provided as to the accuracy, completeness, or suitability of this information. Users are responsible for determining whether this information is suitable and accurate for their particular purposes and specific applications.

For additional clarification regarding any aspect of the product or to ensure an appropriate risk assessment can be conducted, users should contact Rainbow & Brown Ltd directly or obtain further information from the manufacturer. To the fullest extent permitted by law, Rainbow & Brown Ltd accepts no liability for any loss, injury, or damage (including consequential loss) that may result from reliance on the information contained in this SDS. This information is provided in good faith, but no express or implied warranty is made.