

1. PRODUCT & COMPANY IDENTIFICATION

Product Identification/Name:	Decision
Alternative Name:	Flumetsulam 800g/kg / Flumetsulam 80%
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
Fax:	+64 7 350 2008
Toll-Free Phone:	0508 299 299
After Hours Emergency	+64 27 498 2574
National Poisons Centre	0800 764 766
Website:	www.rainbowbrown.co.nz
Date of Issue:	21 September 2018 – Version 1.0
Latest Revision Date:	15 July 2026 – Version 2.1
Expiry Date:	15 July 2031

2. HAZARDS IDENTIFICATION

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

EPA Approval No. HSR101014

Classification of the substance or mixture (HSNO):

Hazardous to the aquatic environment, acute, Category 1
Hazardous to the aquatic environment, chronic, Category 1
Hazardous to soil organisms

Label Elements:

Pictogram	
Signal Word	WARNING
Hazard Statements	
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

H421	Very toxic to the soil environment.
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Precautionary Statements

Prevention:

P102	Keep out of reach of children.
P103	Read label before use.
P273	Avoid release to the environment.

Response:

P391	Collect spillage.
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Storage:

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Disposal:

P501	In accordance with the EPA Hazardous Substances (Disposal) Notice 2017. Refer to Section 13 of this SDS.
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3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredient	CAS Number	Concentration (%w/w)
Flumetsulam	98967-40-9	80%
Other non-hazardous ingredients		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.

Advice to Doctor:	No specific antidote. Treat symptomatically.
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.

5. FIRE FIGHTING MEASURES

Flash Point:	>100°C
Flammable Limits:	Not flammable
Extinguishing Media:	Water spray, dry chemical, foam, CO ₂
Fire & Explosion Hazards:	Not a fire or explosion hazard but may be ignited by intense heat or open flame.
Fire Fighting Equipment:	Wear personal protection equipment include SCBA.
Fire Fighting Instructions:	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

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.
Spills:	Ensure there is appropriate and adequate personal protective equipment, trained personnel and clean up materials for management of accidental release. Avoid release to the environment. Shovel or sweep up spill and place into a container for disposal. Do not flush with water. Label disposal containers. Dispose of waste in accordance with Section 13.

7. HANDLING AND STORAGE

Label:	Read the storage/handling precautions on the product label.
Handling:	Avoid contact with skin and eyes. Avoid inhaling dust. Do not eat, drink or smoke when using this product. Remove contaminated clothing and wash hands and face before entering eating areas. Wash clothing after use.
Storage:	Keep out of reach of children. Store in the closed original container in a dry, cool, well-ventilated area out of direct sunlight. Keep away from food and feedstuffs. Store in accordance with the current version of NZS8409 Management of Agrichemicals. Storage of 100L or more of Decision Flumetsulam 800g/kg requires signage, secondary containment and an emergency response plan.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

Exposure Guidelines:	No established workplace exposure standard in NZ.
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.
Skin Protection:	Wear overalls and chemical resistant gloves while mixing or during application.
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:	Recommend TWA of 10mg/m ³ for dust exposure as a safe guideline.
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 yellowish granule
Odour:	No definitive odour
Odour Threshold:	Not determined
pH:	6-8.5 (1% solution)
Solubility:	Dispersible
Boiling Point:	Not available
Melting point:	Not available
Freezing point:	Not applicable
Evaporation Rate:	Not determined
Flash Point:	>100 °C
Flammability (solid, gas):	Not flammable or combustible
Flammability LEL/UEL:	Not applicable

Vapour Pressure:	3.7 x 10 ⁻⁷ Pa at 25°C (as Flumetsulam)
Decomposition Temperature:	Not determined
Autoignition Temperature:	Not determined
Bulk Density:	600-700 g/cm ³
Partition Coefficient:	Not determined
Viscosity:	Not applicable

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:	Exposure to excessive heat or open flame. Do not apply onto or into water.
Incompatibility:	Strong oxidisers. Keep away from food, feedstuffs, seeds and fertilisers.
Hazardous Decomposition Products:	Oxides of nitrogen, oxides of sulphur and halogen derivatives may be formed.
Hazardous Polymerisation:	This product will not undergo polymerisation reactions.

11. TOXOLOGICAL INFORMATION

Acute Effects	
Ingestion:	LD ₅₀ > 5000 mg/kg (rat)
Inhalation:	Not expected to be harmful by inhalation under normal conditions of use.
Skin corrosion/irritation:	Not expected to be harmful by skin contact. Not expected to be a skin irritant.
Eye damage/irritation:	Not expected to be an eye irritant.
Sensitisation:	Not expected to be a respiratory or skin sensitiser.
Chronic Effects	
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:	No known effects.

12. ECOLOGICAL INFORMATION

Ecotoxicity	EC ₅₀ (algal) 0.0032 mg/L (Flumetsulam).
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	Very toxic to aquatic life with long lasting effects. Avoid losses to the environment wherever possible.
Persistence and biodegradability:	Not readily biodegradable
Bioaccumulation:	No
Soil Toxicity:	Very toxic in the soil environment. Soil DT ₅₀ > 30 days.
Terrestrial vertebrates:	No evidence of toxicity
Terrestrial invertebrates:	No evidence of toxicity
Mobility in soil:	No data

13. DISPOSAL CONSIDERATIONS

Disposal Method:	Do not dispose of product down drains or sewers. Dispose via an approved waste disposal contractor.
Container Disposal:	Ensure container is completely empty. Triple rinse empty containers before disposal. Recycle through an approved recycling facility or dispose of via an approved waste disposal contractor. Return empty container to an AgRecovery collection point for disposal. If unable to recycle, burn if circumstances, especially wind direction, permit. Otherwise bury in a suitable land fill. 

14. TRANSPORT INFORMATION

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

Dangerous Goods Classification:	-
Shipping Name:	Environmentally hazardous substance, solid, N.O.S. (Flumetsulam)
Class:	9
UN Number:	3077
Packaging group:	III
Marine Pollutant:	Yes
Hazchem	2X
IMDG EMS	F-A-S-F
Transport limitations:	Up to 3kg may be carried on a public passenger vehicle. No limitation on non-passenger vehicles. Must be transported in original sealed and labelled container.

15. REGULATORY INFORMATION

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

ACVM Act 1997 Registration No:	P8368
HSNO Act 1996, Approval No:	HSR101014
Substance description:	Water dispersible granule containing 800g/kg flumetsulam
Certified Handler:	Not required
Tracking:	Not required
Compliance Certificate:	Not required
Quantity that must be secured:	Not required
Emergency Response Plan:	100kg
Secondary Containment:	Not a pooling substance
Signage:	100kg
Fire Extinguishers:	No fire extinguisher requirement specified.
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.

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: 15 July 2026

Further Information: Rainbow & Brown Limited
Toll-Free Phone (0508) 299 299