

1. PRODUCT & COMPANY IDENTIFICATION

Product Identification/Name:	WHACK – 2,4-D 800
Alternative Name:	Non-volatile 2,4-D soluble micro granules for broadleaf weed control in cereals and pasture.
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 (0800 243 622) 24,7 365 days a year
Website:	www.rainbowbrown.co.nz
Date of Issue:	23 December 2024
Expiry Date:	23 December 2029

2. HAZARD IDENTIFICATION

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

EPA Approval No:	HSR100573
Pictograms:	
Signal Word:	DANGER

GHS Classification & Category	HSNO Classification	Hazard Code	Hazard Statement
Acute oral toxicity Category 4	6.1D	H302	Harmful if swallowed
Acute inhalation toxicity Category 4	6.1D	H332	Harmful if inhaled
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 1	6.9A	H372	Causes damage to organs through repeated oral exposure at high doses
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 the soil environment	9.2A	H421	Very toxic to the soil environment
Hazardous to terrestrial vertebrates	9.3B	H432	Toxic to terrestrial vertebrates

Prevention Code	Prevention Statement
P102	Keep out of reach of children
P103	Read label before use
P260	Do not breathe dust/spray mist
P261	Avoid breathing dust/spray mist
P264	Wash hands and face thoroughly after handling
P270	Do not eat, drink, or smoke when using this product
P271	Use only outdoors or in a well-ventilated area
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment
P280	Wear protective gloves, eye protection, protective clothing

Response Code	Response Statement
P101	If medical advice is needed, hand product container or label at hand
P301 + P312	IF SWALLOWED: Call a POISON CENTRE or doctor if you feel unwell
P302 + P352	IF ON SKIN: Wash with plenty of soap and water
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing
P305 + P351+ P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
P312	Call a POISON CENTRE or doctor if you feel unwell
P314	Get medical advice/attention if you feel unwell
P330	Rinse mouth
P333 + P313	If skin irritation occurs: Get medical advice/attention
P337 + P313	If eye irritation persists: Get medical advice/attention

P363	Wash contaminated clothing before reuse
P391	Collect spillage

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)
2,4-D dimethylamine salt	2702-72-9	96% min. (equivalent to 80% 2,4-D acid)
Inert ingredients	N/A	Up 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:	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.

5. FIRE-FIGHTING MEASURES

Flammable Limits:	N/A
Extinguishing Media:	Dry chemical, water spray or carbon dioxide
Fire & Explosion Hazards:	None
Fire Fighting Equipment:	Vapours may be toxic. Self-contained breathing apparatus required.
Fire Fighting Instructions:	Do not allow contaminated runoff to enter drains.
Hazchem Code:	2X

6. ACCIDENTAL RELEASE MEASURES

Personal precautions:	Clear area of all unprotected personnel. Keep people upwind of fire. Use appropriate protective clothing and equipment.
Spills:	In the event of a major spill, prevent spillage from entering drains or water courses. Wear full protective clothing including eye/face protection. All skin areas should be covered. Refer to Section 8 for personal protective equipment. If vapours or mists are likely to build up in the clean-up area, we recommend using a respirator. Usually, no respirator is necessary when using this product. Sweep granule concentrates into a pile and into labelled containers for disposal. Decontaminate the spill area with detergent and water and rinse with the smallest volume of water possible. Launder protective clothing before re-use.

7. HANDLING AND STORAGE

Handling:	Read label before use. 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 original container tightly closed and in a locked, dry, cool area away from foodstuffs, seeds, and fertilizers. Storage must be in accordance with the current version of NZS8409 Management of Agrichemicals. Stores containing 100kg or more, are subject to signage, secondary containment and require an emergency response plan.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

Exposure Guidelines:	Ingredient	CAS Number	TWA (mg/m ³)	STEL (mg/m ³)
	2,4-D dimethylamine salt	Confidential information	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.			
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:	White granule
Odour:	Weak
Odour Threshold:	Not available
pH:	4.0-6.0 (1% solution)
Boiling Point:	N/A

Melting Point:	Not available
Freezing Point:	Not available
Flash Point:	Not flammable
Flammability:	N/A
Upper/Lower Flammability or Exposure Limits:	N/A
Vapour Pressure:	Not available
Vapour Density:	Not available
Specific Gravity:	Not available
Water Solubility:	Soluble in water
Partition Coefficient:	Not available
Auto-ignition Temperature:	Not available
Decomposition Temperature:	Not available
Kinematic Viscosity:	Not available
Particle Characteristics:	Not available

10. STABILITY & REACTIVITY

Stability:	Chemical stability - Relatively stable in neutral, weakly acidic and weakly alkaline media. Storage stability – stable under normal storage conditions in original container for at least two years.
Reactivity:	N/A
Conditions to Avoid:	N/A
Incompatibility:	Very strong acid/alkaline formulations
Hazardous Decomposition Products:	None
Hazardous Polymerisation:	N/A

11. TOXOLOGICAL INFORMATION

ACUTE EFFECTS:	
Oral Toxicity:	LD50 (rat) > 625mg/kg
Dermal Toxicity:	Irritant. LD50 (rat) 2115mg/kg
Inhalation Toxicity:	LC50 4hr (rat) > 3.5mg/L air

Eye Corrosion/Irritation:	Irritant
Skin Corrosion/Irritation:	Prolonged or repeated skin contact may result in skin sensitization
CHRONIC EFFECTS:	
Carcinogenicity:	None
Reproductive Toxicity:	None
Germ Cell Mutagenicity:	None
Aspiration:	None
STOT/SE:	None
STOT/RE:	Repeated absorption of relatively large amount of 2,4-D presents a risk to the liver and kidneys

12. ECOLOGICAL INFORMATION

Ecotoxicity (aquatic & terrestrial)	Very toxic to aquatic life with long lasting effects. Very toxic to the soil environment. Toxic to terrestrial vertebrates.
Persistence & Degradability	2,4-D dimethylamine salt is not rapidly degradable
Ecotoxicity Information	Acute Toxicity – Fish: LC50 (96hr) for zebrafish is >1000mg/l for formulated product. LC50 (96hr) for rainbow trout is 100 mg/l for 2,4-D dimethylamine salt Acute Toxicity- Daphnia: LC50 (48hr) for daphnia is >1,128 mg/l for the formulated product. Acute Toxicity- Algae: EC50 (5d) for Selenastrum capricornutum = 33.2 mg/l for 2,4-D. Acute Toxicity- Birds: Oral LD50 bobwhite quail is 500mg/kg for 2,4-D dimethylamine salt Bees: Not toxic to bees: LD50 (contact) >100Ng/bee, (oral) c. 94Ng/bee for 2,4-D dimethylamine salt
Bioaccumulation	2,4-D dimethylamine salt is not bio accumulative
Mobility in soil	Not available
Other adverse effects	None

13. DISPOSAL CONSIDERATIONS

Disposal Method:	Dispose of product only by using according to the label directions or if this is not possible alternatively contact Rainbow & Brown for advice. Do not dispose of this product down drains or sewers.
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Container Disposal:	Triple rinse empty containers and add residue 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 container for any other purpose. 
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14. TRANSPORT INFORMATION

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

Dangerous Goods Classification:	3077
Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (2,4-d, 800g/kg)
Class:	9
UN Number:	3077
Packaging group:	III
Hazchem Code	2X
Marine Pollutant:	Yes

15. REGULATORY INFORMATION

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

ACVM Act 1997 Registration No:	P10296
HSNO Approval No:	HSR100573
Substance description:	Non-volatile 2,4-D soluble micro granules for broadleaf weed control in cereals and pasture.
Certified Handler:	Not required
Qualified Handler:	This product must be under the control of a suitably qualified trained handler when it is applied in a wide dispersive manner or used 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:	100kg

Secondary Containment:	100kg
Signage:	100kg
Fire Extinguishers:	Dry chemical, water spray or carbon dioxide
Record-keeping:	Yes, if 3 kg or more of the substance is applied within 24 hours, in a place where the substance is likely to enter air or water and leave the application area, a PCBU with management or control of the substance must ensure that a written record is kept of each application of the substance.
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:	Not to be applied directly onto or into water. Avoid contamination of any water supply with product or empty container. Regulation 77A – Active ingredient or component specification – impurity limits, purity requirements, isomer ratios and other specification: The maximum application rate of this substance shall be 2.9247 kg a.i./ha with one application per season. Regulation 77A – Label – additional labelling requirements: The label shall contain a statement specifying the minimum droplet size to the following effect: Method Droplet size Reference Aerial No finer than coarse BCPC or ASABE S572 Boom No finer than medium BCPC or ASABE S572. Refer to www.epa.govt.nz for HSR100573 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: 23 December 2024

Reason for Revision: Issued SDS

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