



2,4-D Granules

1. PRODUCT & COMPANY IDENTIFICATION

Product Identification: 2,4-D Amine 800g/kg WG
Product Use: Herbicide
Company Identification: Rainbow & Brown Limited
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2. HAZARDS IDENTIFICATION

Hazard Classifications: 66.1D, 6.1E, 6.3B, 6.4A, 6.5B, 6.9A, 6.9B, 9.1A, 9.2A, 9.3B
Hazard Descriptions: Oral, dermal and inhalation toxicant, skin and eye irritant. Contact sensitiser, target organ (liver) systemic toxicant with sustained repeat exposure at high concentrations. Ecotoxic to aquatic environment, in soil and to terrestrial vertebrates.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<i>Ingredient</i>	<i>CAS Number</i>	<i>Proportion</i>
• 2,4-D present as dimethylamine salt	2008-39-1	800g/kg
• Ingredients not contributing to the hazards		Balance

4. FIRST AID MEASURES

Eyes: Flush with cold water immediately for at least 15 minutes. Seek medical advice.
Skin: Wash skin well with soap and water. Wash contaminated clothing before re-use.
Ingestion: Give plenty of water to drink. Do not induce vomiting. Contact a doctor, or the Poisons Information Centre ... (0800 POISON – 0800 764 766).
Inhalation: If dust is inhaled, move to fresh air. If breathing

Advice to Doctor: difficulty is experienced seek medical attention.
No specific antidote. Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flash Point: None
Flammable Limits: LFL Not Applicable
UFL Not Applicable
Extinguishing Media: Use fire-fighting media suitable for underlying fire:
dry chemical, water spray (fog), foam or CO₂.
Fire & Explosion Hazards: Nil
Fire Fighting Equipment: Use self-contained breathing apparatus.
Do not allow runoff to enter drains.
HAZCHEM: 2X

6. ACCIDENTAL RELEASE MEASURES

Spills: Shovel or sweep up. Do not flush with water.
Place spilled material in a container for disposal.

7. HANDLING AND STORAGE

Handling: Read the storage/handling precautions on the product label.
Keep out of reach of children. Harmful if swallowed. Causes eye irritation and skin sensitivity. Avoid eye, skin & clothing contact. After work, remove protective clothing and equipment, wash hands before eating, drinking, smoking or using toilet. Wash clothing after use.
Storage: Do not mix or store in galvanised or unlined steel vessels. Store in tightly closed original container in a cool, dry, well-ventilated and secure area when not in use. Do not store with food, feedstuffs, seed or fertilisers.

8. EXPOSURE CONTROLS & PERSONAL PROTECTION

Exposure Guidelines: Not established by OSHA.
WES TWA for 2,4-D (CAS94-75-7) is 10mg/m³
WES TWA for dimethylamine is 18mg/m³ and for vapour is 10ppm

Engineering Controls:	Handle in well ventilated area.
Respiratory Protection:	No special precautions are necessary for respiratory protection under normal handling conditions. Natural ventilation should minimise dust, but where dust generation is unavoidable wear an approved dust respirator.
Skin Protection:	Clean body-covering clothing is required.
Eye Protection:	Side shield safety glasses recommended.

Where re-entry is required within 24 hours of application, protective clothing and equipment should be worn.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Solid granule
Melting Point:	140°C (2,4-D acid)
pH value:	6-8
Solubility in water:	Soluble
Vapour Pressure:	(2,4-D acid) 1.9 x 10 ⁻⁵ Pa
Octanol/water partition co-efficient:	Kow Log P -1.01 (25°C)
Flash Point:	Not flammable
Flammability:	Not combustible
Oxidising:	Not an oxidiser

10. STABILITY AND REACTIVITY

Stability:	Stable under normal conditions. May generate toxic fumes in fire.
Incompatibility:	Avoid mixing concentrate or spray mix with acids, which will deactivate the product and block sprayers. Keep away from strong oxidisers.
Hazardous Decomposition Products:	Noxious fumes under fire conditions incl hydrogen, chlorides.
Hazardous Polymerization:	Not applicable.

11. TOXOLOGICAL INFORMATION

Potential Health Effects. This section includes the possible adverse health effects that could occur if the substance is not handled as recommended. No harmful effects are likely if label and MSDS precautions are observed.

Eye:	Will irritate eyes, and prolonged contact may cause eye damage.
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Skin:	Prolonged contact may cause irritation and sensitisation, and lead to dermatitis. Prolonged contact with concentrate may result in absorption of 2,4-D in harmful amounts. Acute toxicity dermal LD50 (rat) is 2,115 mg/kg for 2,4-D dimethylamine salt.
Ingestion:	The LD50 (rat) is 625mg/kg for 2,4-D dimethylamine salt.
Inhalation:	LC50 (rat) 4hr is >3.5mg/L for 2,4-D dimethylamine salt.
Systemic (Other Target Organ) Health Effects:	Repeated excessive exposure to high amounts of concentrated active ingredient may cause liver damage.

The Acceptable Daily Intake (ADI) for 2,4-D for humans is 0.01mg/kg/day based on daily, lifetime exposure. The NOEL is 1mg/kg/day: the level determined as showing no effects during long-term exposure of the most sensitive indicators and the most sensitive species.

12. ECOLOGICAL INFORMATION

Persistence/degradability:	2,4-D is not rapidly degradable in the environment.
Bioaccumulation:	Not bioaccumulative.
Aquatic toxicity:	For 2,4-D dimethylamine salt: LC50 (96hr) for zebrafish is >1000mg/L LC50 (96hr) for rainbow trout is 100mg/L LC50 (48hr) for daphnia is >1,128mg/L
Acute toxicity:	Not toxic to birds. Oral LD50 bobwhite quail is 500mg/kg Not toxic to bees. LD50 (contact) >100Ng/bee

13. DISPOSAL CONSIDERATIONS

Disposal Method:	Follow the label directions. Triple rinse empty containers before disposal. Do not burn empty containers that have not been rinsed. Burn in an appropriate incinerator if circumstances such as wind direction permit. Otherwise crush or puncture and bury in a suitably approved landfill. Do not dispose of this product down drains or sewers. Follow all local, regional
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and national laws and regulations regarding hazardous waste disposal.

14. TRANSPORT INFORMATION

Dangerous Goods Classification:

Shipping Name: Environmentally hazardous substance, solid NOS
(2,4-D 80%)
Class: 9
UN Number: 3077
Packaging group: III

Transport limitations: Do not carry this product on a public passenger vehicle. No limitation on non-passenger vehicles. Must be transported in original sealed and labelled container.

15. REGULATORY INFORMATION

ACVM Registration No: P8924
EPA Approval No: HSR100573
Approved Handler: This product must be under the control of an Approved Handler when being applied in a wide dispersive manner, or applied commercially.
Tracking: Not required.

16. OTHER INFORMATION

Glossary

AEL	Acceptable Exposure Limit
DT ₅₀	Time (days) for 50% loss
EC ₅₀	Median effective concentration
EEL	Environmental Exposure Limit
ERMA	Environmental Risk Management Authority
HSNO	Hazardous Substances & New Organisms Act
Koc	Organic carbon partition coefficient (ml soil water/g organic carbon)
LFL	Lower flammability Limit
LC ₅₀	Lethal Concentration in air or water for 50% of test organisms
LD ₅₀	Lethal Dose for 50% of test organisms
NOEL	No Observable Effect Level
OSHA	Occupational Safety & Health Administration (USA)
OSH	Occupational Safety & Health service (NZ)
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 ERMA/OSH

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 manufacturers 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.

Further Information: Rainbow & Brown Limited
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