

Infosafe No™ 3NV4B	Issue Date : September 2024	ISSUED by NUFARMNZ
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 Product Name **DEBUT®**

Section 1 - Identification

Product Identifier	DEBUT®
Product Code	00670
Product Type	Herbicide
Company Name	Nufarm NZ
Address	Central Park, Building 3, Level 4, 666 Great South Road Ellerslie Auckland 1051 New Zealand
Telephone/Fax Number	Tel: 0-9-270 4150
Emergency Phone Number	0800 651 911
Email	nzinfo@nufarm.com
Recommended uses and any restrictions on use or supply	A selective systemic herbicide for the control of weeds in lucerne and new pasture.
Other Information	This SDS describes, to the best of our knowledge, the properties of the concentrated product. The physical properties and some of the assessments do not apply to the properties of the product once it has been diluted for application. Acute health effects of the diluted product are likely to be much less severe.

Section 2 - Hazard(s) Identification

GHS classification of the substance/mixture	Acute oral toxicity: Category 4 Acute inhalation toxicity: Category 4 Serious eye damage Category 1 Skin sensitization: Category 1 Specific target organ toxicity - repeated exposure: Category 1 Hazardous to the terrestrial environment: Hazardous to soil organisms Hazardous to the terrestrial environment: Hazardous to terrestrial vertebrates Hazardous to the terrestrial environment: Hazardous to terrestrial invertebrates Hazardous to the aquatic environment chronic Category 2
Signal Word (s)	DANGER
Hazard Statement (s)	H302 Harmful if swallowed H332 Harmful if inhaled H318 Causes serious eye damage H317 May cause an allergic skin reaction H372 Causes damage to organs through prolonged or repeated exposure H411 Toxic to aquatic life with long lasting effects H421 Very toxic to the soil environment H432 Toxic to terrestrial vertebrates H443 Harmful to terrestrial invertebrates
Precautionary Statement – General	P101 If medical advice is needed, have product container or label at hand P102 Keep out of reach of children P103 Read label before use
Pictogram (s)	Health hazard, Corrosion, Environment



Precautionary Statement – Prevention	P264 Wash hands and face thoroughly after handling. P270 Do not eat, drink or smoke when using this product. P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
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Precautionary Statement – Response

P272 Contaminated work clothing should not be allowed out of the workplace.
 P260 Do not breathe dust/fume/gas/mist/vapours/spray.
 P273 Avoid release to the environment.
 P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
 P330 Rinse mouth.
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 P302+P352 IF ON SKIN: Wash with plenty of water.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P312 Call a POISON CENTER/doctor if you feel unwell.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P310 Immediately call a POISON CENTER/doctor.
 P362+P364 Take off contaminated clothing and wash it before reuse.
 P314 Get medical advice/attention if you feel unwell.
 P391 Collect spillage.

Precautionary Statement – Disposal

P501 Dispose of contents/container to an approved landfill..

Section 3 - Composition and Information on Ingredients

Chemical Characterization	Liquid		
Ingredients	<u>Name</u>	<u>CAS</u>	<u>Proportion</u>
	2,4-DB (present as the dimethylamine salt)	94-82-6	500 g/L
	Other ingredients (considered non-hazardous)		10-30 %
	Hydroxyethylidene diphosphonic acid	Proprietary	0-15 %
	Water		Remainder

Section 4 - First Aid Measures

First-aid Measures	For advice contact the National Poisons Centre 0800 POISON (0800 764 766) or a doctor immediately. Begin artificial respiration if the victim is not breathing. Use mouth-to-nose rather than mouth-to mouth. Obtain medical attention.
Inhalation	Remove patient to fresh air. Lay down and keep warm and rested. If breathing is shallow or has stopped ensure airway is clear and apply resuscitation. Seek medical assistance immediately.
Ingestion	Never give anything by mouth to an unconscious person. If swallowed do NOT induce vomiting. For advice, contact the National Poisons Centre (0800 764 766). Seek medical assistance immediately.
Skin	Immediately flush body and clothes with large amounts of water. Remove contaminated clothing and footwear. Wash affected areas with soap and water. If a large area is affected seek medical assistance.
Eye	Flush eyes with plenty of water for 15 minutes holding eyelids open if necessary. Remove contact lenses, if present and easy to do. Seek medical assistance even if there are no immediate symptoms.
First-aid Facilities	Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower.
Advice to Doctor	Treat symptomatically.

Section 5 - Firefighting Measures

Suitable Extinguishing Media	If involved in a fire, the product will not burn. Choose extinguishing media to suit the burning material.
Hazards from Combustion Products	Non-combustible. If involved in a fire, it will emit carbon monoxide, phosgene and possibly oxides of phosphorous.

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Special protective equipment for fire-fighters	Full protective clothing and self-contained breathing apparatus.
Specific Methods	Keep up wind. Do not allow washings to reach sewage or effluent systems.
Hazchem Code	2Z
Decomposition Temperature	Information is not available.
Other Information	Location Certificate: Not applicable Hazardous Atmosphere Zone: Not applicable Number of Fire Extinguishers: Not applicable

Section 6 - Accidental Release Measures

Spills and Disposal	Wear protective clothing. Clear area of unprotected personnel. Contain spill and absorb with sand, soil or absorbent granules. If spill does enter waterways contact the local authority. Collect in an appropriate sealable container for disposal in an approved landfill. Wash area with water and absorb with further inert material. Dispose of waste safely in an approved landfill.
Personal Protection	For appropriate personal protective equipment (PPE), refer Section 8.
Environmental Precautions	Prevent from entering drains, waterways or sewers.

Section 7 - Handling and Storage

Precautions for Safe Handling	The person mixing or applying DEBUT must be a 'Qualified Contractor' or 'Qualified Loader'. For more information refer to the Hazardous Substances Property Controls Notice 2017. It is the duty of the PCBU that a person who uses, handles, manufactures or stores a hazardous substance (including hazardous waste) is provided information, instruction and training in accordance with Regulation 4.5 of the Health and Safety at work (Hazardous Substances) Regulations 2017. Avoid skin and eye contact and inhalation of spray mist. Do not apply directly into or onto water. Do NOT contaminate dams, rivers or streams, or any other water bodies with chemical or used containers. This product must not be applied onto or into water. BEWARE: Spray drift hazard. Apply this product carefully. Spray drift may cause serious damage to other desirable plants. CERTIFIED HANDLER: Is not required. TRACKING: Is not required. RECORD KEEPING: Records, as described in NZS 8409 Management of Agrichemicals, must be kept if 3L or more of Debut is applied within 24 hours. Records must be kept for a minimum of 3 years from application date.
Conditions for safe storage, including any incompatibilities	Keep out of reach of children. Store in original container tightly closed and in a locked, dry, cool area away from sources of ignition and foodstuffs. Storage must be in accordance with NZS 8409 Management of Agrichemicals. Stores containing 1000L of DEBUT are subject to signage and secondary containment and more than 1000L require emergency response plans.
Other Information	Aggregate Storage Volume Thresholds: When stored with substances of the same hazard classification the aggregate quantity must be considered. For full details refer to the current NZS8409 Management of Agrichemicals and the HSNO Regulations.

Section 8 - Exposure Controls and Personal Protection

Occupational Exposure Limits (OEL)	No exposure standard for this product has been set, however, an exposure standard has been set for dimethylamine vapour at 2 ppm.
Appropriate Engineering Controls	Use in a well ventilated area only.

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Personal Protective Equipment	When opening the container and preparing the spray wear cotton overalls buttoned to the neck and wrist and a washable hat, elbow-length PVC gloves and face shield or goggles.
Hygiene Measures	Do not eat, drink or smoke while using. Remove protective clothing and wash hands and face thoroughly before meals and after work. Wash splashes of concentrate from skin immediately. Wash protective clothing daily after work.

Section 9 - Physical and Chemical Properties

Form	Liquid
Appearance	Clear straw coloured to amber liquid.
Odour	Faint ammonical odour.
Decomposition Temperature	Information is not available.
Melting Point	Approx -5°C
Boiling Point	100°C
Solubility in Water	Soluble in water.
Specific Gravity	1.17
pH	9.0-10.0 (1% aqueous)
Vapour Pressure	9.4×10^{-2} mPa (23.6°C) for 2,4-DB.
Vapour Density (Air=1)	Information is not available.
Odour Threshold	Information is not available.
Volatile Component	16 - 30%
Partition Coefficient: n-octanol/water	Kow logP = 1.35 (pH 7, 20°C) for 2,4-DB.
Flash Point	Information is not available.
Flammability	Not flammable.
Auto-ignition Temperature	Information is not available.
Flammable Limits - Lower	Information is not available.
Flammable Limits - Upper	Information is not available.
Kinematic Viscosity	Data not available.
Particle Characteristics	Information is not available.
Other Information	Soluble Concentrate.

Section 10 - Stability and Reactivity

Chemical Stability	Stable under normal conditions of handling and storage.
Incompatible Materials	Reaction of the concentrate or spray mix with acids will precipitate solid 2,4-DB acid and largely de-activate the product and cause blockages in spray equipment. The addition of a strong alkali such as caustic soda will cause release of dimethylamine vapour.
Hazardous Polymerization	Hazardous polymerisation is not possible.

Section 11 - Toxicological Information

Acute Toxicity - Oral	LD50 (rat) 1470 mg/kg for 2,4-DB.
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Acute Toxicity - Inhalation	LC50(4hr) >2.3 mg/l air for 2,4-DB.
Acute Toxicity - Dermal	LD50 (rat) >2000 mg/kg for 2,4-DB.
Skin	Information is not available.
Corrosion/Irritation	
Serious Eye Damage/Irritation	Causes serious eye damage.
Skin Sensitisation	May cause an allergic skin reaction.
Germ Cell Mutagenicity	Information is not available.
Carcinogenicity	Information is not available.
Reproductive Toxicity	Information is not available.
STOT - Single Exposure	Information is not available.
STOT - Repeated Exposure	Causes damage to organs through prolonged or repeated exposure.
Aspiration Hazard	Information is not available.
Human Effects	Symptoms of acute overexposure may include: headache, nausea, dizziness and vomiting. In extreme cases, possibly twitching and spasms, dyspnea, cyanosis and exhaustion.
Chronic Effects	Chronic Overexposure: Weight loss and damage to liver and kidneys may be expected if exposure is excessive.
Other Information	The Australian Acceptable Daily Intake (ADI) for 2,4-DB for a human is 0.004 mg/kg/day, set for the public for daily, lifetime exposure. This is based on the NOEL of 1.9 mg/kg/day, the level determined to show no effects during long term exposure for the most sensitive indicators and the most sensitive species. (Ref: Aust Govt Dept. of APVMA, 'ADI List', Edition 2/2024).

Section 12 - Ecological Information

Persistence and Degradability	Average field half life of 2,4-DB dimethylamine salt is 10 days.
Mobility	Information is not available.
Environmental Fate	2,4-DB has a moderate potential to bioaccumulate with a BCF of 175 L/kg. In susceptible plants it rapidly undergoes B-oxidation to 2,4-D which is then degraded to 2,4-dichlorophenol, followed by ring hydroxylation and ring opening. In tolerant plants B-oxidation to 2,4 D is very slow.
Bioaccumulative Potential	Moderate to low.
Other Precautions	Do not spray in high winds. Do not contaminate dams, waterways or sewers with this product or the containers which have held this product.
Environmental Protection	Spray drift can cause damage, read the label for more information.
Acute Toxicity - Daphnia	EC50 (48h) 25mg/L for 2,4-DB.
Acute Toxicity - Other Organisms	Bees: not toxic to bees for 2,4-DB. Worms: LC50 for Eisenia foetida >1000mg/kg soil for 2,4-DB.

Section 13 - Disposal Considerations

Product Disposal	Dispose of product only by using according to the label, or at an approved landfill.
Container Disposal	Triple rinse empty container and add rinsate to spray tank. Recycle empty container. Otherwise crush and bury in a suitable landfill.

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Section 14 - Transport Information

Transport Information	It is good practice not to transport agricultural chemical products with food, food related materials and animal feedstuffs.
UN Number	3082
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. - (2,4-DB)
Hazard Class	9
Hazchem Code	2Z
Packing Group	III
EPG Number	9C1
IERG Number	47
IMO Marine Pollutant	Yes. Marine Pollutant mark required.
EMS	F-A, S-F
Other Information	Segregation: Check the latest Land Transport Rule Dangerous Goods Rule 45001 for additional information. Sea transport may require additional segregation. Refer NZS5433 sea segregation for details. Do not carry DEBUT on a passenger service vehicle.

Section 15 - Regulatory Information

National and or International Regulatory Information	Registered pursuant to the ACVM Act 1997, No. P9697 See www.foodsafety.govt.nz for registration conditions Approved pursuant to the HSNO Act 1996, Approval Code HSR101356 See www.epa.govt.nz for approval controls.
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Section 16 - Any Other Relevant Information

Date of preparation or last revision of SDS	January 2020.
Contact Person/Point	IN AN EMERGENCY, DIAL 111 - FIRE OR POLICE 24Hr Tollfree Emergency No: 0800 651 911 24Hr Emergency No: National Poisons Centre Phone: 0800 764 766
Revisions Highlighted	Various changes and updates made to the document to comply with GHS7. ...End Of MSDS...

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