Section 1 – Identification of the substance/preparation and the company

Product Name: Donaghys Broadleaf Kill 2,4-D Amine

Company: Donaghys Ltd.

Address: 16 Sheffield Crescent
PO Box 20 449
Christchurch

Telephone Number: 0800 942 006

Manufacturers Product Code: AG24020 / AG24100 / AG241000

Recommended Use: Selective herbicide

Section 2 – Hazard Identification

HSNO Classifications: 6.1E, 6.4A, 6.9A, 9.1A, 9.2A, 9.3B

GHS Hazard Classifications:

Specific target organ toxicity – single exposure Category 3 respiratory tract irritation
Eye irritation Category 2
Specific target organ toxicity – repeated exposure Category 1
Hazardous to the aquatic environment chronic Category 1
Hazardous to soil organisms
Hazardous to terrestrial vertebrates

Hazard Statements:
H303 - May be harmful if swallowed
H305 - May be harmful if swallowed and enters airways
H313 - May be harmful in contact with skin
H319 - Causes serious eye irritation
H372 - Causes damage to organs through prolonged or repeated exposure
H410 - Very toxic to aquatic life with long lasting effects
H421 - Very toxic to the soil environment
H432 - Toxic to terrestrial vertebrates

Precaution Statements:
P102 - Keep out of reach of children
P103 - Read label before use
P260 - Do not breathe dust/fume/gas/mist/vapours/spray
P264 - Wash hands thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
P273 - Avoid release to the environment
P280 - Wear protective nitrile rubber gloves, protective overalls, chemical resistant safety glasses or full-face protection

Signal Word: WARNING

EPA NZ Approval Code: HSR000607

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Section 3 – Composition Information

Chemical	CAS No.	Content
2,4-D Dichlorophenoxyacetic acid (2,4-D Acid)	2569-01-9	400 g L^{-1}
Triethanolamine	102-71-6	340 g L^{-1}

Balance made up of non-hazardous material
(ERMA New Zealand User Guide to the Thresholds and Classifications)

Section 4 – First Aid Measures

General	Never give anything by mouth to an unconscious person. Keep label or packaging available for emergency personnel. Show this SDS to emergency personnel if requested
If Swallowed:	Rinse mouth. DO NOT induce vomiting. Have person sip a glass of water if able to swallow. Immediately call the National POISON CENTER (0800 764 766) or a doctor/physician.
If in eyes:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. If eye irritation persists: Get medical advice/attention.
If on skin:	Wash with plenty of soap and water. Wash contaminated clothing before reuse. Contact a medical practitioner if symptoms persist.
If inhaled:	Remove to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention. If person is not breathing, call 111 and request an ambulance.
Advice for medical personnel:	Treat according to symptoms. There are no specific antidotes.

If medical advice is needed, have product container or label at hand.
POISON CENTRE CONTACT: 0800 764 766 (National Poisons Information Centre)

Section 5 – Fire-fighting Measures

Flashpoint:	Not flammable (tested to 200 °C)
Combustion Products:	May give off toxic nitrogen oxides, and hydrogen chloride in a fire
Flammability Limits:	Not available
Protective Equipment:	Self-contained breathing apparatus, protective gloves and clothing
Extinguishing Media:	Water fog, Foam, carbon dioxide, dry chemicals
Hazchem Code:	3Z
Special Fire Fighting Methods:	Prevent run off entering waterways

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Section 6 – Accidental Release Measures

Small Spill (non-emergency personnel)

Spills and Disposal:	Absorb spill with an inert material and place in suitable labeled container. We recommend kitty litter. For final cleaning up, a detergent based solvent may be required. Collect spillage.
Protective Equipment:	Wear protective nitrile rubber gloves, face/eye protection and appropriate half-mask respirator (see section 8).
Environmental Precautions:	Avoid entry into waterways or streams. Prevent washings from entering waterways by damming or covering drain entrances, if safe to do so.

Large Spill (emergency personnel)

Spills and Disposal:	Absorb spill with an inert material and place in suitable labeled container. We recommend kitty litter. For final cleaning up, a detergent based solvent may be required.
Protective Equipment:	Wear protective nitrile rubber gloves, face/eye protection and appropriate half-mask respirator (see section 8).
Environmental Precautions:	Avoid entry into waterways or streams. Prevent washings from entering waterways by damming or covering drain entrances, if safe to do so. Collect spillage.
Prevention	Level 1 emergency management plans need to be in place for quantities between 0.1 and 5 L Level 2 emergency management plans need to be in place for all workplaces and or quantities between 5 L and 100 L Level 3 emergency management plans need to be in place for quantities above 100 L

See Hazardous Substances (Emergency Management) Regulations 2001

Section 7– Handling and Storage

Storage:	Store out of direct sunlight. Keep out of reach of children. Do not store near waterways. Do not store where damage may occur.
Handling:	Do not handle until all safety instructions have been read and understood. Wear eye / face protection. In case of inadequate ventilation wear respiratory protection. Contaminated work clothing should not be allowed out of the workplace. Avoid unintended release to the environment.

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Approved Handler:	This hazardous substance must be under the personal control of and approved handler when the substance is applied in a wide dispersive manner; or used by a commercial contractor. For more information see Regulations 4-6 Hazardous substances (Personnel Qualifications) Regulations 2001.
Tracking regulations:	Do not apply
Record Keeping	Records of use as described in NZS 8409 Management of Agrichemicals must be kept where more than 3 kg of this product is used within 24 hours in a place where pesticide is likely to enter air or water and leave the application area.

Section 8 – Exposure Controls/Personal Protection

These precautions are suggested for conditions where the potential for exposure to the product exists. Emergency conditions may require additional precautions.

Exposure Limits:	Workplace exposure - Time weighted average (TWA) 10 mg/m^3 Tolerable Exposure Limits: (TEL): Not Available Environmental Exposure Limits (EEL): Not available
Protective Equipment:	Observe good work place practices and avoid contact with skin and eyes. To protect your skin and eyes, wear protective overalls, chemical resistant safety glasses and nitrile rubber gloves when handling. Wear eye / face protection. In case of inadequate ventilation, wear half mask filter respiration unit suitable for dust. **Gloves** Wear nitrile rubber gloves with a minimum layer thickness of 0.11 mm. Break through time: 480 min This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario. **Respiratory protection** For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards
Hygiene Precautions:	Do not eat, drink or smoke when using this product. Be careful not to contaminate yourself when removing contaminated clothing.
Engineering Controls:	Handle in well-ventilated area. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below exposure limits. Avoid inhalation of dust.

Section 9 – Physical and Chemical Properties

Appearance:	Creamy yellow liquid
Odour	Slight phenolic/ammoniacal odour
pH:	7.5-9.5
Vapour Pressure:	1.40 × 10-7 mm Hg at 20 °C (2,4-D) 3.59X10-6 mm Hg at 25 °C
Vapour Density:	Not available
Boiling Point:	160 °C at 4 mm Hg (2,4-D) 350 °C at 4 mm Hg (Triethanolamine)
Freezing/Melting point	138 °C (2,4-D) 21.5 °C at 4 mm Hg (Triethanolamine)
Flash Point:	Not available
Solubility:	Miscible in water (2,4-D 677 ppm at 25 °C)
Specific Gravity:	1.10-1.30 (mixture)
Dissociation Constant (pK_a)	2.73 (2,4-D) 7.76 (Triethanolamine)

Section 10 – Stability and Reactivity

Stability:	Stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.
Conditions to Avoid:	Avoid direct sunlight, avoid generation of dust and excessive heat.
Materials to Avoid:	Incompatible with acids and oxidizing agents
Hazardous Decomposition Products:	May give off toxic nitrogen oxides, and hydrogen chloride in a fire

Section 11 – Toxicological Information

Oral LD_{50}:	Rat > 3000 mg kg^{-1} The ingestion of several ounces of triethanolamine can probably be tolerated by man, but unless the liquid is partly neutralized with acid, alkali burns of the mouth, pharynx and esophagus are likely.
Inhalation LC_{50}:	Rat > 5.8 mg L^{-1}
Dermal:	Triethanolamine has been identified as causing allergic contact dermatitis, erythematous vesicular lesions, eczema, contact dermatitis, and irritation in workers exposed to triethanolamine in their occupations. 2,4-D contact with the skin may cause a rash prolonged exposure can cause dermatitis.

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Ocular:	Mild irritation
Carcinogenicity:	Consensus from WorkSafe is that 2,4-D does not cause cancer Triethanolamine is not classifiable as to its carcinogenicity to humans
Reproductive toxicity:	No conclusive evidence
Genotoxicity:	Not genotoxic.
Neurotoxicity:	No sub chronic neurotoxicity. No neurodevelopmental toxicity.

Section 12 - Ecological Information

EPA Classification:	9.1A, 9.2A, 9.3C
Aquatic toxicity:	Very toxic to the aquatic environment
Vertebrate toxicity	Substances that are ecotoxic to terrestrial vertebrates
Invertebrate toxicity	Substances that are ecotoxic to terrestrial invertebrates
Soil toxicity	Substances that are very ecotoxic in the soil environment
Bioaccumulation	No evidence
Atmospheric toxicity	Rapidly degrades in the atmosphere
General	2,4-D should not be used if there is a risk to bees and a risk of run off into waterways.

Section 13 – Disposal Considerations

Product Disposal:	When empty, triple rinse container and add residues to spray tank. Dispose of empty container at an approved landfill or other approved facility. Avoid contamination of any water supply with product or empty container. Do not re-use container

Section 14 – Transport Information

Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID N.O.S (Contains 2,4-D)
UN Number:	3082
DG Class:	9
Subsidiary Risk Class:	N/A
Packing Group:	III
HAZCHEM Code:	3Z

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Section 15 – Regulatory Information

EPA NZ Registration Code:	HSR000607 See http://www.epa.govt.nz for approval conditions
ACVM Approval Number:	P007647 See www.foodsafety.govt.nz for registration conditions
Approved handler:	This hazardous substance must be under the personal control of and approved handler when the substance is applied in a wide dispersive manner; or used by a commercial contractor. For more information see Regulations 4-6 Hazardous substances (Personnel Qualifications) Regulations 2001.
Tracking requirements:	Not required

Section 16 – Other Information

The information in this SDS is provided in good faith, but no warranty, expressed or implied is made. Contact Donaghys Ltd for more information.

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