



SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **ETHOSAT HERBICIDE**
Chemical name of active: Propane-1, 2-diol
Product Use: Herbicide
Restriction of Use: Refer to Section 15

New Zealand Supplier: ADAMA New Zealand Ltd
Address: Level 1/93 Bolt Road
Tahunanui, 7011, Nelson
Telephone: +64 3 543 8275
Email: nzorders@adama.com

**Emergency Telephone: 0800 764 766 (National Poison Centre)
0800 734 607 (24hr Emergency Response)**

Date of SDS Preparation: 18 July 2022

Section 2. Hazards Identification

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

EPA Approval No: HSR000826

Pictograms



Signal Word: **Warning**

HSNO Classification	Hazard Code	Hazard Statement
Hazardous to the aquatic environment chronic Category 2	H411	Toxic to aquatic life with long lasting effects.
Hazardous to soil organisms	H421	Very toxic to the soil environment.

Prevention Code	Prevention Statement
P103	Read label before use.
P273	Avoid unintended release into the environment.

Response Code	Response Statement
P391	Collect spillage.

Storage Code	Storage Statement
None allocated	Store in the original, unopened container in a cool, dry place, out of direct sunlight and away from stockfeed or foodstuffs. As a substance with Aquatic Ecotoxicity Classifications, storage of Ethosat

	Herbicide must be carried out in such a manner as to prevent contamination of waterways. It is recommended that The New Zealand Standard for the Management of Agrichemicals (NZS8409) is followed
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Disposal Code	Disposal Statement
P501	Wherever possible completely use material by using according to label instructions. Dispose of unwanted product and wastes from spillages as hazardous substances in accordance with local and national regulations using a licensed waste disposal company. Triple rinse containers and add rinsate to spray tank before puncturing and offering for recycling or landfill. Do not allow product to enter waterways. Do not burn product or container.

Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
Ethofumesate	44	26225-79-6
Non-hazardous	To balance	NA

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes Rinse cautiously with water for 15 minutes If eye irritation persists: Get medical advice/attention.

If on Skin Wash off immediately with soap and plenty of water. If skin irritation occurs: Get medical advice/attention.

If Swallowed Wash out mouth with plenty of water. Get medical attention. Never give anything by mouth to an unconscious person. Call a POISON CENTER or doctor/physician if you feel unwell.

If Inhaled Remove person to fresh air. Remove contaminated clothing and loosen remaining clothing. Allow person to assume most comfortable position and keep warm. Keep at rest until fully recovered. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms:

Ingestion: Not applicable

Skin: Not applicable

Inhalation: Not applicable

Eyes: Not applicable

Chronic: Not applicable

Section 5. Fire Fighting Measures

Hazard Type	Non-Flammable.
Hazardous thermal (de)composition products	Carbon oxides (CO, CO ₂) sulphur oxides (SO ₂ , SO ₃).
Suitable Extinguishing media	SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
Precautions for firefighters and special protective clothing	Fire fighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.
HAZCHEM CODE	3Z

Section 6. Accidental Release Measures

Wear full protective clothing as detailed in Section 8. Evacuate area from unnecessary personnel. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.

Environmental precautions

Do not allow into any sewer, on the ground or into any body of water. Should not be released into the environment. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up

Take up mechanically, placing in appropriate containers for disposal. Dispose as per Local Regulations in Section 13.

Section 7. Handling and Storage

Precautions for Handling:

- Read label before use.
- When mixing or applying wear appropriate protective clothing including cotton overalls buttoned to the neck and wrist, impervious, elbow-length gloves, and eye protection.
- Remove protective clothing and wash hands, arms and face with soap and water before meals and after work.
- Avoid unintended release into the environment.

Precautions for Storage:

- Keep out of the reach of children.
- Store away from incompatible materials listed in Section 10.
- Store in the original, unopened container in a cool, dry place, out of direct sunlight and away from stockfeed or foodstuffs.
- As a substance with Aquatic Ecotoxicity Classifications, storage of Ethosat Herbicide must be carried out in such a manner as to prevent contamination of waterways. It is recommended that The New Zealand Standard for the Management of Agrichemicals (NZS8409) is followed.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m3	ppm	mg/m3
Propane-1, 2-diol (total, vapor and particulates),	150	ppm	474	10 (particulates)

Workplace Exposure Standard – Time Weighted Average (WES-TWA). The time-weighted average exposure standard designed to protect the worker from the effects of long-term exposure. Workplace Exposure Standard – Short-Term Exposure Limit (WESSTEL). The 15-minute average exposure standard. Applies to any 15- Minute period in the working day and is designed to protect the worker against adverse effects of irritation, chronic or irreversible tissue change, or narcosis that may increase the likelihood of accidents. The WES-STEL is not an alternative to the WES-TWA; both the short-term and time-weighted average exposures apply. Workplace Exposure Standards and Biological Exposure Indices NOV 2017 9TH EDITION.

Engineering Controls

In workplace ensure good ventilation.

Personal Protection Equipment

Eyes	Safety goggles or face shield.
Hands and Skin	When mixing or applying wear appropriate protective clothing including cotton overalls buttoned to the neck and wrist, impervious, elbow-length gloves, and eye protection. Remove protective clothing and wash hands, arms and face with soap and water before meals and after work
Respiratory	If fumes build up, use suitable breathing mask.
General	Keep containers closed when not in use. Facilities storing or utilizing this material should be equipped with an eyewash facility and safety shower. Wash hands thoroughly after handling. Wash clothing before re-using. When handling do not eat, drink or smoke. Wash hands thoroughly after handling. Wash clothing separately before re-use.

Section 9 Physical and Chemical Properties

Appearance	Liquid
Colour	Beige
Odour	Sweet
Odour Threshold	Not available
pH	Not available
Boiling Point	100°C
Melting Point	70-72°C
Freezing Point	Not available
Flash Point	Not available
Flammability	Not available
Upper and Lower Explosive Limits	Not available
Vapour Pressure (20°C)	2,3 x 10e-6hPa (Ethofumesate ISO)
Density (g/ml)	1,1377 (20°C)
Specific Gravity	Not available
Water Solubility	0,13 g/l (pH 5), 0,125 g/l (pH7), 0,132 g/l (pH9)
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Viscosity	772 mPas
Particle Characteristics	Not available
Surface tension	44 mN/m (21,1°C)

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Conditions to Avoid	Protect from frost
Incompatible Materials	None known.
Hazardous Decomposition Products	Carbon oxides (CO, CO ₂) sulphur oxides (SO ₂ , SO ₃)

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable. Rat Oral LD 50 [mg/kg] >2000 (OECD 423)
Dermal	Not applicable. Rat dermal LD50 [mg/kg] >4000 (OECD 402)
Inhalation	Not applicable. Rat inhalation LC50 mg/l/4h] >4,29 (OECD 403)
Eye	Not applicable.
Skin	Not applicable.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Not applicable.

Section 12. Ecotoxicological Information

HSNO Classification: Hazardous to the aquatic environment chronic Category 2, Hazardous to soil organisms.

Persistence and degradability	No data available
Bioaccumulation	No data available
Mobility in Soil	No data available
Other adverse effects	No data available

The following information is based on Ethofumesate

Toxic to fish: LC50 22-26,5 mg/l/96h, NOEC 9,3 – 9,7 mg/l/96h
Toxic to daphnia: EC50 70,5 mg/l/48h, NOEC 20 mg/l/48h
EC50 >35 mg/l/21d, NOEC 11,1 mg/l/21d
Toxic to algae: *Scenedusmus suspicatus* EbC50 6,65 mg/l/72h, ErC50 12,42 mg/l/72h
NOEC 3,5 mg/l/72h

Section 13. Disposal Considerations

Disposal Method: Wherever possible completely use material by using according to label instructions. Dispose of unwanted product and wastes from spillages as hazardous substances in accordance with local and national regulations using a licensed waste disposal company. Triple rinse containers and add rinsate to spray tank before puncturing and offering for recycling or landfill.



Precautions: Do not allow product to enter waterways.

Disposal methods to avoid: Empty containers should be taken for local recycling or waste disposal. Do not re-use empty containers. Do not burn product or container.

Section 14**Transport Information**

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

Road and Rail Transport

UN No: 3082
 Class-primary 9
 Packing Group III
 Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains ethofumesate)

Air Transport

UN No: 3082
 Class-primary 9
 Packing Group III
 Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains ethofumesate)

Marine Transport

UN No: 3082
 Class-primary 9
 Packing Group III
 Proper Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Contains ethofumesate)
 Marine Pollutant: Yes

Special Provisions:

If the product's individual container is below 5L, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

Section 15**Regulatory Information**

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

HSNO Approval Code: HSR000826

HSW (HS) Regulations 2017	Trigger Quantity
Certified Handlers	Not Required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	1000 L
Emergency Response Plan	1000 L
Secondary Containment	1000 L
Hazardous Property Controls Notice 2017	
HPC Notice Part 1	Hazardous Property Controls preliminary provisions
HPC Notice Part 3	Hazardous substances in a place other than a workplace
HPC Notice Part 4 Subpart A	Substances that are hazardous to the environment: Site and storage controls
HPC Notice Part 4 Subpart B	Use of substances that are hazardous to the environment
HPC Notice Part 4 Clause 47	Equipment for environmentally hazardous substances must be appropriate

HPC Notice Part 4 Clause 48	Records of application of ecotoxic pesticides and plant growth regulators
HPC Notice Part 4 Clause 52	Agrichemicals that are hazardous to the aquatic environment must not be applied to water
HPC Notice Part 4 Subpart C	Qualifications required for the application of substances that are hazardous to the environment
ACVM Act and Regulations	
Registered pursuant to the ACVM Act 1997, See www.foodsafety.govt.nz for registration conditions	No. P8169

Section 16 Other Information

Glossary

ACVM	Agricultural Compounds and Veterinary Medicines Act 1997.
EC50	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority.
HSNO	Hazardous Substances and New Organisms Act 1996.
HSW	Health and Safety at Work Act 2015.
HSW (HS) Regulations	Health and Safety at Work (Hazardous Substances) Regulations 2017.
LC50	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD50	Lethal dose to kill 50% of test animals/organisms.
LEL	Lower explosive level.
TEL	Tolerable Exposure Limit.
TLV	Threshold Limit Value-an exposure limit set by responsible authority.
WES	Workplace Exposure Limit.

References:

1. Hazardous Substances (Safety Data Sheets) Notice 2017
2. Hazardous Substances (Hazard Classification) Notice 2020
3. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
4. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
5. Transport of Dangerous goods on land NZS 5433
6. HSW (Hazardous Substances) Regulations 2017

Disclaimer:

This document has been issued by Adama New Zealand Ltd and serves as their Safety Data Sheet ('SDS'). It is based on information concerning the product which is held by Adama New Zealand Ltd or has been obtained from third party sources and is believed to represent the current state of knowledge as to the appropriate safety and handling precautions for the product at the time of issue. While Adama New Zealand Ltd have taken all due care to include accurate and up-to-date information in this SDS, it does not provide any warranty as to accuracy or completeness. As far as lawfully possible, Adama New Zealand Ltd accept no liability for any loss, injury or damage (including consequential loss) which may be suffered or incurred by any person as a consequence of their reliance on the information contained in this SDS. The information herein is given in good faith, but no warranty, express or implied is made.

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