



## SAFETY DATA SHEET

### Section 1. Identification of the material and the supplier

|                             |   |
|-----------------------------|---|
| Product:                    | <b>ETHOSAT HERBICIDE</b>  |
| 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<br>Tahunanui, 7011, Nelson   |
| Telephone:                  | +64 3 543 8275  |
| Email:                      | <a href="mailto:nzorders@adama.com">nzorders@adama.com</a>                                    |
| <b>Emergency Telephone:</b> | <b>0800 764 766 (National Poison Centre)</b><br><b>0800 734 607 (24hr Emergency Response)</b> |
| 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.<br>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 |
|--|--|

| 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

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

## 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/m <sup>3</sup> | ppm  | mg/m <sup>3</sup> |
| Propane-1, 2-diol<br>(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

|                       |   |
|-----------------------|---|
| <b>Eyes</b>           | Safety goggles or face shield.  |
| <b>Hands and Skin</b> | 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  |
| <b>Respiratory</b>    | If fumes build up, use suitable breathing mask.   |
| <b>General</b>        | 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

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

## Section 10. Stability and Reactivity

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

## Section 11 Toxicological Information

### Acute Effects:

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

### Chronic Effects:

|                               |                 |
|-------------------------------|-----------------|
| <b>Carcinogenicity</b>        | Not applicable. |
| <b>Reproductive Toxicity</b>  | Not applicable. |
| <b>Germ Cell Mutagenicity</b> | Not applicable. |
| <b>Aspiration</b>             | Not applicable. |
| <b>STOT/SE</b>                | Not applicable. |
| <b>STOT/RE</b>                | Not applicable. |

## Section 12. Ecotoxicological Information

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

|                                      |                   |
|--------------------------------------|-------------------|
| <b>Persistence and degradability</b> | No data available |
| <b>Bioaccumulation</b>               | No data available |
| <b>Mobility in Soil</b>              | No data available |
| <b>Other adverse effects</b>         | 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

| <b>HSW (HS) Regulations 2017</b>               | <b>Trigger Quantity</b>   |
|--|---|
| 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  |
| <b>Hazardous Property Controls Notice 2017</b> |   |
| 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 |
| <b>ACVM Act and Regulations</b>  |   |
| Registered pursuant to the ACVM Act 1997, See <a href="http://www.foodsafety.govt.nz">www.foodsafety.govt.nz</a> 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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