



SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **Torero®**
Chemical name of active Ing: 4-amino-3-methyl-6-phenyl-1,2,4-triazin-5-one
Product Use: For post-emergence use in red beet, fodder beet, sugar beet and mangolds.
Restriction of Use: Refer to Section 15
New Zealand Supplier: ADAMA New Zealand Ltd
Address: Level 1/93 Bolt Road
Tahunanui, Nelson
Telephone: +64 3 543 8275
Fax Number: +64 3 543 8274
**Emergency Telephone: 0800 764 766 (National Poison Centre)
0800 734 607 (24hr Emergency Response)**

Date of SDS Preparation: 13 June 2022

Section 2. Hazards Identification

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

EPA Approval No: HSR100598

Pictograms



Signal Word: **Warning**

| GHS Classification and Category | Hazard Code | Hazard Statement |
|---|-------------|--|
| Specific target organ toxicity – repeated exposure Category 2 | H373 | May cause damage to organs through prolonged or repeated exposure. |
| Hazardous to the aquatic environment chronic Category 2 | H411 | Toxic to aquatic life with long lasting effects. |
| Hazardous to soil organisms | H421 | Hazardous to soil organisms. |
| Hazardous to terrestrial vertebrates | H433 | Hazardous to terrestrial vertebrates. |

| Prevention Code | Prevention Statement |
|-----------------|--|
| P102 | Keep out of reach of children. |
| P103 | Read label before use. |
| P260 | Do not breathe fumes, vapours or spray. |
| P273 | Avoid unintended release to the environment. |

| Response Code | Response Statement |
|---------------|---|
| P101 | If medical advice is needed, have product container or label at hand. |
| P314 | Get medical advice/attention if you feel unwell. |

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|------|-------------------|
| P391 | Collect spillage. |
|------|-------------------|

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|---------------------|--------------------------|
| Storage Code | Storage Statement |
| None | Not applicable |

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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. |
|--------------------------|--------|-------------|
| Metamitron | 30.7 | 41394-05-2 |
| Ethofumesate | 13.2 | 26225-79-6 |
| Propane-1,2-diol | 1-5 | 57-55-6 |
| Organic phosphoric ester | 1-<5 | Proprietary |
| Non-hazardous | To bal | - |

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.

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

If Swallowed Wash out mouth thoroughly with water. Never give anything to the mouth of an unconscious person. If vomiting occurs, place victim face downwards, with the head turned to the side and lower than the hips to prevent vomit entering the lungs. Seek medical attention if needed.

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:

Inhaled: Not applicable.

Ingestion: Not applicable.

Skin. Not applicable.

Chronic: May cause damage to organs through repeated or prolonged exposure.

Section 5. Fire Fighting Measures

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|---|--|
| Hazard Type | Non-Flammable. |
| Hazards from combustion 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 | Fire fighters should wear positive pressure self-contained breathing |

| | |
|---|---|
| firefighters and special protective clothing | apparatus (SCBA) and full turnout gear. |
| HAZCHEM CODE | 2X |

Section 6. Accidental Release Measures

Wear full protective clothing as detailed in Section 8. Evacuate area from unnecessary personnel. Ensure sufficient supply of air. Avoid inhalation and contact with eyes or skin.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not allow into any sewer, on the ground or into any body of water. Prevent product from entering drains. Local authorities should be advised if significant spillages cannot be contained.

Methods and material for containment and cleaning up

Reposition any leaking containers so as to minimise further leakage. Dam and absorb spill with an absorbent material (e.g. sand, soil, diatomaceous earth or vermiculite). Shovel the absorbed spill into drums. Decontaminate the spill area with detergent and water and rinse with the smallest volume of water practicable.

Disposal of the absorbed material will depend upon the extent of the spill. Contaminated material must be disposed of in accordance with all local authority requirements.

- For quantities up to 50 L of product bury in a secure approved landfill site.
- For quantities greater than 50 L seek advice from the manufacturer (use emergency contact number below) before attempting disposal. Contain in a secure location until disposal method is established.

Section 7. Handling and Storage

Precautions for Handling:

- Read label before use.
- Do not breathe fumes, vapours or spray.
- Wash hands thoroughly after handling.
- Prevent formation of explosive mixtures.
- Avoid unintended release to the environment.
- 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.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Keep away from children.
- Store in a well-ventilated place. Keep container tightly closed.
- Only store at temperatures from -5°C to 35°C.
- Effects with light as well as warmth.
- Store in the original, unopened container in a cool, dry place, out of direct sunlight and away from stockfeed or foodstuffs.
- As an environmentally hazardous substance with aquatic ecotoxicity classifications, storage of Torero® 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 (NZS 8409) is followed as a means of meeting the secondary containment provisions of the Hazardous Substances (Hazardous Property Controls) Notice 2017.

Section 8 Exposure Controls / Personal Protection**WORKPLACE EXPOSURE STANDARDS (provided for guidance only)**

| Substance | TWA | | STEL | |
|----------------------------|-----|-------------------|------|-------------------|
| | ppm | mg/m ³ | ppm | mg/m ³ |
| Propane-1,2-diol [57-55-6] | | | | |
| Vapour and particulates | | 150 | 474 | |
| Particulates only | | | 10 | |

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 2019 11TH EDITION.

Engineering Controls

In workplace ensure good ventilation. Wash hands thoroughly after handling.

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 | Respiratory protection is not required if good ventilation is maintained. |
| General | Do not eat, drink or smoke when using this product. Be careful not to contaminate yourself when removing contaminated clothing. |

Section 9 Physical and Chemical Properties

| | |
|---|--|
| Appearance | White, beige, liquid, viscous |
| Odour | Slightly |
| Odour Threshold | Not applicable |
| pH 1% | 6,42 (CIPAC MT 75) |
| Boiling Point | Not applicable |
| Melting Point | Not applicable |
| Flash Point | > 104°C (DIN EN 227 19) |
| Flammability | Not applicable |
| Upper and Lower Exposure Limits | Not applicable |
| Vapour Pressure | Not applicable |
| Vapour Density (air=1) | 2,3 -6 hPa (20°C) |
| Density (g/ml) | 1,14 (20°C) |
| Specific Gravity | Not applicable |
| Solubilities | Dispersion |
| Partition coefficient (n-octanol/water): | log Pow 0,85 (21°C)*, log Pow 2,69 ** (OECD 107) |
| Auto Flammability | 485° C (EEC A14, DIN 51794) |
| Viscosity: | 134,1 mPas/20°C, 116,9 mm ² /s20°C (OECD 114) |
| Surface tension: | 39,3 mN/m (90%, 20°C) (EEC A5) |

Section 10. Stability and Reactivity

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|---|---|
| Stability of Substance | This product is stable under normal conditions. |
| Conditions to Avoid | Protect from frost. |
| Incompatible Materials | Avoid contact with other chemicals. Avoid contact with strong oxidizing agents. |
| Hazardous Decomposition Products | Oxides of carbon, oxides of nitrogen & oxides of Sulphur. |

Section 11 Toxicological Information**Acute Effects:**

| | |
|-------------------|---|
| Swallowed | Not triggered. LD50 (rat) = >2000 mg/kg |
| Dermal | Not triggered. LD50 (rat) > 4,000 mg/kg |
| Inhalation | Not applicable. |
| 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 | May cause damage to organs through repeated or prolonged exposure. |

Individual component information:**Acute Toxicity:**

| Chemical Name | Oral – LD50 | Dermal – LD50 | Inhalation – LC50 |
|-------------------------|--------------------|----------------------|----------------------------------|
| Metamitron (41394-05-2) | 650 mg/kg (dog) | 1000mg/kg (Rat) | 0.206mg/l (mouse) (dust/mist) |

Section 12. Ecotoxicological Information

HSNO Classes: Hazardous to the aquatic environment chronic Category 2, Hazardous to soil organisms, Hazardous to terrestrial vertebrates.

On product:

Persistence and degradability: Not readily biodegradable*

Behaviour in sewage plants: EC50 = 2188 mg/l

Toxicity to fish: LC50 141 mg/l/96h, NOEC 12,5mg/l (OECD 203)

Toxicity to daphnia: EC50 62,4 mg/l/48h, NOEC 22,3 mg/l, LOEC 40, 1 mg/l (OECD 202)

Toxicity to algae: EbC50 2,83 mg/l/72h, ErC50 6,53 mg/l/72h, NOEC 2,92 mg/l, LOEC 5,25 mg/l (OECD 201)

Common name:**Metamitron**

Mobility:

Soil – Low mobility.

Persistence/degradability:

Soil:

The product is non persistent

Half-life time (t_{1/2}): 30-90 days

Degradation is primarily via: microorganisms.

Water:

Hydrolytic DT50 t_{1/2}: 143 d at pH 5 (25°C)

DT50 t_{1/2}: 132 d at pH 7 (25°C)

DT50 t_{1/2}: 17.5 d at pH 9 (25°C)

Inherently degradable: > 79% in 28 days.

Water pollution class (WGK): 2 – impairment of water quality.

Ecotoxicity:

Fish:

LC50 (96 hours) = 443 mg/L; golden orfe (Leuciscus melanotus)

LC50 (96 hours) = 326 mg/L; rainbow trout (oncorphynchus mykiss)

LC50 (96 hours) = 194 mg/L; carp (Cyprinus carpio)

Daphnia;

EC50 (48 hours) = 101.7 mg/L; Water flea (Daphnia magna)

Algae

Growth rate:

IC50 (72 hours) = 1.8 mg/L; green alga (Selenastrum capricornutum)

Ecotoxicity:

Birds:

Japanese quail LD50 = 1,534 mg/kg

Do not allow to enter waterways.

Section 13. Disposal Considerations

Disposal Method: Ensure container is empty. Triple rinse empty container and add rinsate to spray tank. Recycle empty container through Agrecovery (0800 247 326, www.agrecovery.co.nz). Otherwise crush or puncture and bury in a suitable landfill. DO NOT reuse this container for any other purpose.



Precautions: Do not allow product to enter waterways.

Disposal methods to avoid: Do not allow product to enter waterways.

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 Metamitron) |

Air Transport

| | |
|-----------------------|--|
| UN No: | 3082 |
| Class-primary | 9 |
| Packing Group | III |
| Proper Shipping Name: | Environmentally Hazardous Substance, Liquid, N.O.S. (Contains Metamitron) |

Marine Transport

| | |
|-----------------------|--|
| UN No: | 3082 |
| Class-primary | 9 |
| Packing Group | III |
| Proper Shipping Name: | Environmentally Hazardous Substance, Liquid, N.O.S. (Contains Metamitron) |
| Marine Pollutant | Yes |

Section 15 Regulatory Information

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

EPA Approval Code: HSR100598

HSNO Classification: Specific target organ toxicity (repeated exposure) Category 2, Hazardous to the aquatic environment chronic Category 2, Hazardous to soil organisms, Hazardous to terrestrial vertebrates.

| HSW (HS) Regulations 2017 | Trigger Quantity |
|---|---|
| Certified Handlers | Not required |
| Location Certificate | Not required |
| Signage Trigger Quantities (Schedule 3) | 1000L |
| Emergency Response Plan (Schedule 5) | 1000L |
| Secondary Containment (Schedule 16) | 1000L |
| Tracking (Schedule 26) | Not required |
| Record Keeping | Records of use must be kept under certain circumstances – see The New Zealand Standards for Management of Agrichemicals (NZS8409) for details. |
| HSNO Additional Controls (Restrictions of use) | |
| 77A | The method of application of the substance shall be limited to ground-based application only. |
| Hazardous Property Controls Notice 2017 | |
| 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 50 | The maximum application rate for Torero® shall be 2 L/ha (0.3078 kg ethofumesate/ha and 0.7142 kg metamitron/ha), with a maximum application frequency of 3 applications per season and a minimum application interval of 5 days. |
| 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. |
| For all further controls: | Refer to EPA website www.epa.govt.nz for controls document - HSR100598 |
| ACVM Act and Regulations | |
| ACVM Approval No | P9879 |
| See www.foodsafety.govt.nz for registration conditions. | |

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. |
| OSHA | American Occupational Safety and Health Administration. |
| TEL | Tolerable Exposure Limit. |
| TLV | Threshold Limit Value-an exposure limit set by responsible authority. |
| UEL | Upper Explosive Level. |
| WES | Workplace Exposure Limit. |

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2020
2. Workplace Exposure Standards and Biological Exposure Indices Nov 2017 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2012
5. HSW (Hazardous Substances) Regulations 2017

Disclaimer:

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Review Date:

29 June 2027