

SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **Triabon**
 Product Use: Fertiliser
 Restriction of Use: Refer to Section 15

New Zealand Supplier: Horticulture Ltd
 Address: 10 Firth Street
 Drury, 2113

Telephone: +64 9 294 8453
 Fax Number: +64 9 294 7272

Emergency Telephone: 0800 764 766 (National Poison Centre)

Date of SDS Preparation: 24 March 2022

Section 2. Hazards Identification

Classified as NOT hazardous according to Regulation (EC) No. 1272/2008 which meets New Zealand jurisdiction criteria as per EPA Hazardous Substances (Classification) Notice 2020.

Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
Manganese Sulphate(1;1)	≤0.4	7785-87-7
ammonium nitrate	≤5	6484-52-2
Borates, tetra sodium salts, pentahydrate	≤2	12179-04-3
disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-)	≤0.5	14025-15-1

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 Clean mouth with water and drink afterwards plenty of water. 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. In case of lung irritation, first treatment with dexametason aerosol (spray).

Most important symptoms and effects, both acute and delayed

Symptoms: None known.

Notes to Doctor: Treat symptomatically.

Section 5. Fire Fighting Measures

Hazard Type	Non-combustible substance with oxidizing ingredient
Hazards from combustion products	Can decompose at above 100 °C. Thermal decomposition products: carbon monoxide Carbon dioxide (CO ₂) Nitrogen monoxide, nitrogen dioxide, dinitrogenoxide, ammonia
Suitable Extinguishing media	Water Not suitable: Foam, Dry chemical, Carbon dioxide (CO ₂) and Sand
Precautions for firefighters and special protective clothing	Self-contained breathing apparatus. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
HAZCHEM CODE	None Allocated

Section 6. Accidental Release Measures

Wear protective equipment as detailed in Section 8. Clear area of any unprotected personnel. Avoid dust formation. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.

Use mechanical handling equipment for cleanup.

Do not empty into drains. Retain and dispose of contaminated wash water.

Section 7. Handling and Storage

Precautions for Handling:

- Always read the label and product information before use.
- The product is not flammable.
- Keep away from heat and sources of ignition.
- Keep away from combustible materials.
- Keep away from direct sunlight.
- Protect against heat.
- Protect from moisture.
- At the end of the shift the skin should be cleaned and skin care agents applied.

Precautions for Storage:

- Do not store together with other substances.
- Keep away from direct sunlight.
- Protect from contamination.
- Protect from moisture.
- When stored loose do not mix with other fertilizers.
- Keep in a dry place.
- Protect against humidity (product is hygroscopic and tends to cake or disintegrate).

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance**TWA**
ppm mg/m³**STEL**
ppm mg/m³

No ingredients have exposure limits

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 2020 12TH EDITION.

Engineering Controls

Ensure adequate ventilation is available

Personal Protection Equipment

Eyes	Not required but good practice to wear eye protection when handling chemicals.
Hands and Skin	Not required but good practice to wear gloves when handling chemicals.
Respiratory	Breathing apparatus only if aerosol or dust is formed.

Section 9 Physical and Chemical Properties

Appearance	Various colours - Granular
Odour	Odourless
Odour Threshold	Not available
pH	ca. 6.1 Concentration: 100 g/l (20 °C)
Boiling Point	Not available
Melting Point	>130°C
Freezing Point	Not available
Flash Point	Not available
Flammability	The product is not flammable.
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available
Bulk Density	950 kg/m ³
Solubilities	Soluble
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Ca 100 °C To avoid thermal decomposition, do not overheat. Thermal decomposition above the indicated temperature is possible.
Kinematic Viscosity	Not available
Particle Characteristics	Not applicable

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Hazardous reactions	Evolution of ammonia under influence of alkalis.
Conditions to Avoid	Protect from frost, heat and sunlight. Avoid moisture.
Incompatible Materials	Alkaline reactive substances.
Hazardous Decomposition Products	Carbon dioxide (CO ₂) Carbon monoxide

Section 11 Toxicological InformationProduct Name: Triabon
Date of SDS: 24 March 2022SDS Prepared by: Technical Compliance Consultants (NZ) Ltd
Tel: 64 9 475 5240 www.techcomp.co.nz

Acute Effects:

Swallowed	Not applicable. Product= LD50 (Rat) = >2000mg/kg
Dermal	Not applicable.
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	Not applicable.

Components:**manganese sulphate (1:1):**

Acute oral toxicity : LD50 (Rat): 2.150 mg/kg

ammonium nitrate:

Acute oral toxicity : LD50 (Rat): > 2.950 mg/kg
Method: OECD Test Guideline 401

Acute inhalation toxicity : > 88,8 mg/l
Method: No information available.

Acute dermal toxicity : LD50 (Rat): > 5.000 mg/kg
Method: OECD Test Guideline 402

Borates, tetra sodium salts, pentahydrate:

Acute oral toxicity : LD50 (Rat): 3.200 - 3.400 mg/kg
Method: No information available

Acute inhalation toxicity : LC50 (Rat): > 2,0 mg/l
Method: OECD Test Guideline 403

Acute dermal toxicity : LD50 (Rabbit): > 2.000 mg/kg
Method: No information available

disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-):

Acute oral toxicity : LD50 Oral (Rat): > 1.750 mg/kg

Section 12. Ecotoxicological Information**Product:****Product:**

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna): > 100 mg/l
Exposure time: 48 h
Method: OECD Test Guideline 202
Remarks: Information refers to the main component.

Toxicity to bacteria : EC50 : ca. > 100 mg/l
Exposure time: 4 h
Test Type: activated sludge
Remarks: Inhibition of degradation activity in activated sludge is not to be anticipated during correct introduction of low concentrations.

Components:

manganese sulphate (1:1):

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 30 mg/l

ammonium nitrate:

Toxicity to fish : LC50 (Fish): > 100 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia (water flea)): 490 mg/l
Exposure time: 48 h

LC50 : 490 mg/l

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 1.700 mg/l
Exposure time: 10 d

Borates, tetra sodium salts pentahydrate:

Toxicity to fish : LC50 (Fish): 74 mg/l
Exposure time: 96 h

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 242 mg/l
Exposure time: 24 h

Toxicity to algae : EC10 (Scenedesmus subspicatus): 24 mg/l
Exposure time: 96 h

disodium [[N,N'-ethylenebis[N-(carboxymethyl)glycinato]](4-)-N,N',O,O',ON,ON']cuprate(2-):

Toxicity to fish : LC50 (Fish): > 100 mg/l

Toxicity to algae : EC50 : 30 mg/l
Exposure time: 96 h

Persistence and degradability	The organic components of the product are biodegradable. The methods for determining the biological degradability are not applicable to inorganic substances.
Bioaccumulation	Bioaccumulation is unlikely. log Pow: <4 Ammonium nitrate: Partition coefficient: n : Log Pow -3.1 octanol/water
Mobility in Soil	No data available
Other adverse effects	There is a high probability that the product is acute not harmful to aquatic organisms. At higher pH values, which can be found in natural surface waters, an increase of toxic effects on aquatic organisms may be expected. The product has not been tested. The information is derived from the properties of the individual components.

Section 13. Disposal Considerations

Disposal Method: Contaminated packaging should be emptied as far as possible then it can be passed on for recycling after being thoroughly cleaned.

Disposal methods to avoid: None known.

Section 14 Transport Information

Section 15 Regulatory Information

Classified as NOT hazardous according to Regulation (EC) No. 1272/2008 which meets New Zealand jurisdiction criteria as per EPA Hazardous Substances (Classification) Notice 2020.

Section 16 Other Information

Glossary

Cat	Category
EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
LC ₅₀	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD ₅₀	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 2017
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

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