SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product:	**Magri Trace Green**
Item Code:	M-H1211
Product Use:	Trace nutrients for plants
Restriction of Use:	Refer to Section 15
New Zealand Supplier:	Horticentre Ltd
Address:	10 Firth Street Drury, 2113
Telephone:	+64 9 294 8453
Fax Number:	+64 9 294 7272
New Zealand:	**0800 764 766 (National Poison Centre)**
Date of SDS Preparation:	1 June 2023 v3

Section 2. Hazards Identification

Classified as hazardous according to Regulation (EC) No. 1272/2008 [CLP] which meets New Zealand jurisdiction criteria as per EPA Hazardous Substances (Safety Data Sheets) Notice 2017.

EPA Approval No: Fertilisers (subsidiary) – HSR002571

Pictograms

Signal Word: **DANGER**

GHS Classification and Category	Hazard Code	Hazard Statement
Acute oral toxicity Cat. 4	H302	Harmful if swallowed.
Skin irritation Cat. 2	H315	Causes skin irritation.
Eye irritation Cat. 2	H319	Causes serious eye irritation.
Respiratory sensitisation Cat. 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Reproductive toxicity Cat. 2	H361	Suspected of damaging fertility or the unborn child.
Specific target organ toxicity – repeated exposure Cat. 1	H372	Causes damage to organs through prolonged or repeated exposure.
Hazardous to the aquatic environment chronic Cat. 2	H411	Toxic to aquatic life with long lasting effects.
Hazardous to terrestrial vertebrates	H431	Hazardous to terrestrial vertebrates

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read carefully and follow all instructions.
P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P260	Do not breathe dust, fumes, gas, mist, vapours or 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 clothing as detailed in Section 8.
P281	Use personal protective equipment as required.
P285	In case of inadequate ventilation wear respiratory protection.

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.
P330	Rinse mouth.
P362	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P341	IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/ attention.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

Storage Code	Storage Statement
P405	Store locked up.

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
Borax Pentahydrate	1 - 5	12179-04-3
Magnesium Oxide	30 - 40	1309-48-4

Metallic sulphates	55 - 65	7758-99-8 17375-41-6 10034-96-5
Metallic Molybdates	1 - 3	10102-40-6
Zinc Sulphate	3 - 7	7746-19-7
Balance of ingredients are non-hazardous or hazardous in less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitisers)		

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes — Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice.

If on Skin — Wash with plenty of soap and water. Take off contaminated clothing and wash before re-use. If skin irritation occurs: get medical advice/attention.

If Swallowed — DO NOT induce vomiting. Clean out mouth with water and then drink plenty of 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:

Ingestion: Harmful if swallowed.
Inhalation: May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin: Causes skin irritation.
Eye: Causes serious eye irritation.
Chronic: Suspected of damaging fertility or the unborn child. Causes damage to organs through prolonged or repeated exposure.

Section 5. Fire Fighting Measures

Hazard Type	Not flammable
Hazards from combustion products	Thermal decomposition may release irritating gases, such as metal oxides, or toxic gases such as carbon monoxide.
Suitable Extinguishing media	Use extinguishing media suitable for surrounding fire based on surrounding materials. Use Carbon dioxide or suitable dry chemical extinguisher. Water Fog or Water Spray. Do not use water jets.
Precautions for firefighters and special protective clothing	Fire fighters should wear a positive pressure self-contained breathing apparatus [SCBA] protective firefighting clothing [includes firefighting helmet, coat, trousers, boots and gloves] chemical splash suit. Wear self-contained breathing apparatus plus suitable protective clothing. Prevent, spillage from entering drains and water courses. Use firefighting procedures suitable for surrounding area.
HAZCHEM CODE	**2Z**

Section 6. Accidental Release Measures

Wear protective equipment as detailed in Section 8. Clear area of any unprotected personnel. Increase ventilation.

Do not allow to enter drains, sewers, streams or ponds. If contamination occurs advise emergency services.

Slippery when wet. Avoid walking through spilled product. Isolate the danger area.
Use clean, non-sparking tools and equipment. Mechanically collect as much of the spill as possible. Shut off all possible sources of ignition. Transfer to suitable, labelled, corrosion-resistant containers and dispose of promptly as hazardous waste. Dispose of according to Local Regulations detailed in Section 13.

Section 7. Handling and Storage

Precautions for Handling:

- Read carefully and follow all instructions.
- Obtain special instructions before use.
- Do not handle until all safety precautions have been read and understood.
- Do not breathe dust, fumes, gas, mist, vapours or spray.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Avoid release to the environment.
- Wear protective clothing as detailed in Section 8.
- Use personal protective equipment as required.
- In case of inadequate ventilation wear respiratory protection.
- Ensure an eye bath and safety shower are available and ready to use.
- Avoid Personal contact, including inhalation.
- Use in well ventilated area.

Precautions for Storage:

- Keep out of reach of children.
- Store locked up.
- Store in manufacturers original packaging and containers.
- Keep containers securely sealed when not in use.
- Store in a cool, dry, well ventilated area.
- Keep out of direct sunlight and away from sources of heat or ignition.
- Check regularly for spills.
- Store away from incompatible materials (acids and strong oxidisers) and foodstuff and containers.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance		TWA ppm	TWA mg/m³	STEL ppm	STEL mg/m³
Borates, tetra, sodium salts (Pentahydrate)	[12179-04-3]	-	1	-	-
Magnesium oxide fume	[1309-48-4]	-	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 APRIL 2022 13TH EDITION.

Engineering Controls

Engineering controls are used to remove a hazard or place a barrier between the worker and the hazard. Well-designed engineering controls can be highly effective in protecting workers and will typically be independent of worker interactions to provide this high level of protection.

Personal Protection Equipment:

Eyes	Wear goggles with side shields. Avoid wearing contact lenses.
Hands and Skin	Wear gloves to prevent irritation and drying of skin, always wash hands before eating, drinking or using the toilet. Wear overalls, and protective footwear to prevent contact with skin, chemical resistant apron if necessary. Wash contaminated clothing and other protective equipment before storage or re-use.
Respiratory	Dust mask / respirator meeting requirements of AS/NZS 1716.
General	Do not eat, drink or smoke while using this product. Remove protective clothing and wash hands and face before meals and after work. Wash protective clothing daily after work.

Section 9 Physical and Chemical Properties

Appearance	Powder - Solid
Odour	Characteristic
Odour Threshold	Not available
pH	Not applicable
Boiling Point	Not available
Melting Point	Not available
Freezing Point	Not available
Flash Point	Not available
Flammability	Not flammable
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Negligible
Vapour Density	Not available
Relative Density	Not available
Solubilities	Partly in water
Partition Coefficient:	Not available
Auto-ignition Temperature	Not self igniting
Decomposition Temperature	Not available
Kinematic Viscosity	Not available
Particle Characteristics	Not applicable

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions of use and storage.
Conditions to Avoid	Avoid generation of dust while handling.
Incompatible Materials	Acids and strong oxidisers.
Hazardous Decomposition Products	Thermal decomposition may release irritating gases, such as metal oxides, or toxic gases such as carbon monoxide.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Harmful if swallowed. Swallowing may result in irritation of the gastrointestinal tract. Ingestion of large quantities may lead to vomiting, abdominal pain, dizziness, convulsions, shock, coma, and possible death.
Dermal	Not applicable.
Inhalation	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause coughing, shortness of breath, nausea. Risk of sensitisation and dermatitis.
Eye	Causes serious eye irritation.
Skin	Causes skin irritation and may aggravate existing dermatitis.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Suspected of damaging fertility or the unborn child.
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Causes damage to organs through prolonged or repeated exposure. Not applicable.

Substance data:

Name	Route	Result
Borax Pentahydrate	oral	LD50 Rat: 3200 – 3400 mg/kg
	dermal	LD50 Rabbit: > 2000 mg/kg
	inhalation	LC50 Rat: >2.0 mg/L
Copper Sulphate	oral	LD50 Rat: 472.5 mg/kg
	inhalation	LC50 Rat: >2.95 mg/L/h
Ferrous Sulphate	oral	LD50 Rat: 132 – 881 mg/kg
	dermal	LD50 Rat: >400 mg/kg
Molybdenum	oral	LD50 Rat: 4 gm/kg
	inhalation	LC50 Rat: >2080 mg/m^3/4h
Zinc Sulphate	oral	LD50 Rat: 1260 mg/kg

Section 12. Ecotoxicological Information

Toxic to aquatic life with long lasting effects.
Hazardous to terrestrial vertebrates.

Name	Result
Ethyl acetate	Fish LC50 P. promelas: 230 mg/L (96 h)
	Aquatic Invertebrates EC50 Daphnia Cucullata: 165 mg/L (48 h)
C.I. Solvent Black 29	Fish LC50 Zebra fish: >100 mg/L (96 hr)
	Aquatic Plants EC50 Desmodesmus subspicatus: >100 mg/L (72 hr)
Ethanol	Fish LC50 Alburnus alburnus: 11,000 mg/L (Paramaecium caudatum)
	Aquatic Invertebrates EC50 Daphnia magna: >10,00 mg/L (48 hr [mobility])
	Aquatic Plants EC50 Chlorella vulgaris: 275 mg/L (72 hr [growth rate])
	Bacteria LC50 Paramaecium caudatum: 5,800 mg/L (4 hr [mortality])
Propan-2-ol	Fish LC50 Pimephales promelas: 10,000 mg/L (96 hr)
	Aquatic Invertebrates LC50 Daphnia magna: >10,000 mg/L (48 hr [immobilization])

Persistence and degradability	No data available
Bioaccumulation	Not likely to Bi-accumulate
Mobility in Soil	No data available
Other adverse effects	No data available

Section 13. Disposal Considerations

Disposal Method:
Dispose in accordance with all applicable regulations. It is the responsibility of the user of the product to determine, at the time of disposal.

Precautions and methods to avoid:
Do not allow to enter waterways. Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

Section 14 Transport Information

This product is classified as a Dangerous Good for transport in NZ ; NZS 5433:2012

Road and Rail Transport

UN No:	3077
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. [Contains Zinc Sulphate]

Air Transport

UN No:	3077
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. [Contains Zinc Sulphate]

Marine Transport

UN No:	3077
Class-primary	9
Packing Group	III
Proper Shipping Name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. [Contains Zinc Sulphate]
Marine Pollutant:	Yes

Section 15 Regulatory Information

EPA Approval Code: Fertilisers (subsidiary) – HSR002571

HSNO Classification: 6.1D(oral), 6.1E(asp), 6.3B, 6.5B, 6.8B, 6.9A, 8.3A, 9.1A, 9.3B

HSNO Controls:
Trigger quantities for this substance:

	Trigger Quantity
Approved Handler	Not required as per Group Standard
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	100L(9.1A)

Emergency Response Plan	100L(9.1A)
Secondary Containment	100L(9.1A)
Restriction of Use	None

Section 16 Other Information

Glossary

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

1. HSNO Approved Code of Practice: Preparation of Safety Data Sheets, September 2006.

Disclaimer

This document has been issued by TCC (NZ) Ltd and serves as their Safety Data Sheet ('SDS'). It is based on information concerning the product which has been provided to TCC (NZ) Ltd or 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. Further clarification regarding any aspect of the product should be obtained directly from the manufacturer. While TCC (NZ) 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, TCC (NZ) 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.

Please contact the New Zealand distributor, if further information is required.

Issue Date: 17 November 2017 Review Date: 17 November 2022