

Section 1: SUBSTANCE AND SUPPLIER DETAILS

GHS Product Identifier: Tomato Trace Element Mix
Other Name[s]: Horticulture – Tomato Trace Element Mix
Proper Shipping Name: Tomato Trace Element Mix
Chemical Formula: Composition
Product Code: M-H1305, M-H1305-10
CAS Number: n/a

PRODUCT USE

Recommended Use: Crop Support

SUPPLIER DETAILS

Company Name: Image Holdings Limited
Address: 50 Central Park Drive, Henderson, Auckland 0610, New Zealand
Telephone: 0064 9 834 3783
Email: info@imageholdings.co.nz
Website: www.imageholdings.co.nz

EMERGENCY TELEPHONE NUMBERS

National Poisons Information Centre: 0800 POISON (0800 764 766)
Emergency Telephone Number: 0800 764 766
Other Emergency Numbers: 0064 21 934 058
Transport Emergency: 111: Tell operator what service is needed: Fire, Ambulance, Police.
Please ensure that the limitations of this Safety Data Sheet are referred to as set out in Section 16: Other Information at the end of this document.

Section 2: HAZARDS IDENTIFICATION

CLASSIFICATION OF SUBSTANCE OR COMPOSITION

Transport Classification: Not Classified as a Dangerous Goods according to NZS 5433:2012 Transport of Dangerous Goods on Land
Hazard Classifications: Classified as hazardous according to criteria in the Hazardous Substances & New Organisms Act 2015
Classified as Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals [GHS Rev.7]
HSNO Approval Number: HSR002571
HSNO Classifications:
6.1D: Substances that are acutely toxic - Harmful.
6.8B: Substances that are suspected human reproductive or developmental toxicants
6.9A: Substances that are toxic to human target organs or systems
6.9B: Substances that are harmful to human target organs or systems
8.3A: Substances that are corrosive to ocular tissue
9.1C: Substances that are harmful in the aquatic environment
9.3C: Substances that are harmful to terrestrial vertebrates
GHS Classification:
Acute Toxicity [Oral] - Category 4
Serious eye damage/irritation - Category 1
Reproductive toxicity - Category 2
Specific target organ toxicity [single exposure] - Category 1
Specific target organ toxicity [repeated exposure] - Category 2
Hazardous to the aquatic environment, long-term [Chronic] - Category 3
Hazardous to terrestrial vertebrates

HAZARD STATEMENT[S]

H302: Harmful if swallowed.
H318: Causes serious eye damage.
H361: Suspected of damaging fertility or the unborn child.
H370: Causes damage to organs.
H373: May cause damage to organs through prolonged or repeated exposure.
H412: Harmful to aquatic life with long lasting effects.
H431: Very toxic to terrestrial vertebrates

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Reference: IHL-SDS222

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Version: 1

GHS PICTOGRAMS:

Signal Word:

DANGER

Pictogram:



GHS05



GHS07



GHS08



GHS09

PRECAUTIONARY STATEMENT(S):

Prevention:

- P202:** Do not handle until all safety precautions have been read and understood.
P260: Do not breathe dust.
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 gloves/protective clothing/eye protection/face protection/hearing protection.

Response:

- P310:** Immediately call a POISON CENTER/doctor
P314: Get medical advice/attention if you feel unwell.
P321: Specific treatment (see label).
P330: Rinse mouth.
P331: Do NOT induce vomiting.
P301+P312: IF SWALLOWED: Call a POISON CENTER/doctor/if you feel unwell.
P308+P311: If exposed or concerned: Call a POISON CENTER/ doctor
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing.

Storage:

P405: Store locked up.

Disposal:

P501: Dispose of contents/container in accordance with local/regional/national/international regulation.

Other Hazards:

None known

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS No.	CONCENTRATION	HAZARD CODES
Iron Chelate 13%	15708-41-5	74.0 %	6.1D, 9.1C
Borax Pentahydrate	12179-04-3	13.5 %	6.1D, 6.4A, 6.8B
Manganese Sulphate	10034-96-5	7.9 %	6.1D, 6.9A, 9.1B, 9.3C
Zinc Sulphate	7746-20-0	3.2 %	6.1D, 8.3A, 6.9B, 9.1A, 9.3C
Copper Sulphate	7758-99-8	1.0 %	6.1D, 6.3A, 6.4A, 9.1A, 9.3C
Sodium Molybdate	10102-40-6	0.4 %	6.3B, 6.4A
Balance of ingredients are non-hazardous or hazardous in less than 1% in concentration (or 0.1% for carcinogens, reproductive toxins, or respiratory sensitisers)		Balance	-

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely

Section 4: FIRST AID MEASURES

FIRST AID MEASURES

Consult the National Poisons Centre on 0800 POISON (0800 764 766) or a doctor immediately in every case of suspected poisoning.

Inhalation:

If Inhalation of product occurs:

- Remove patient from area of exposure – avoid becoming a casualty.
- Remove contaminated clothing and loosen remaining clothing
- Allow patient to assume comfortable position and keep warm and rested.
- Provide emergency airway support if required
- If breathing is shallow or has stopped ensure airway is clear and apply resuscitation.
- Seek medical assistance.

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Ingestion:**If ingestion occurs:**

- DO NOT induce vomiting.
- Clean mouth with Water and then drink plenty of water, seek medical attention.
- For advice, contact the National Poisons Centre on 0800 POISON (0800 764 766) or Doctor
- Never give anything by mouth to an unconscious person.
- **Seek medical assistance.**

Skin:**If skin contact occurs:**

- Remove all contaminated clothing immediately
- Wash affected area thoroughly with water
- **Seek medical assistance if irritation occurs.**

Eye:**If this product comes in contact with eyes:**

- Immediately hold eyelids open and flush the eye continuously with running water
- Continue flushing until advised to stop by Poisons Information Centre or a doctor, or for at least 15 minutes to prevent permanent injury
- Remove contact lenses if present and easy to do.
- **Seek medical assistance**

Advice to Doctor:

Treat symptomatically. Refer to National Poisons & Hazardous Chemicals Information Centre 0800 764 766

Section 5: FIRE FIGHTING MEASURES**EXTINGUISHING MEDIA****If material is involved in fire use:**

- There is not restriction on type of media which may be used
- 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

SPECIFIC HAZARDS**Hazards of Combustion:**

Decomposes on heating and may emit toxic fumes including those of Carbon Dioxide and Oxides of Coper and Zinc

ADVICE TO FIREFIGHTERS**Fire Fighting**

- Alert Fire Brigade and tell them location and nature of hazard
- Wear self-contained breathing apparatus plus suitable protective clothing
- Prevent, spillage from entering drains and water courses
- Use firefighting procedures suitable for surrounding area

Protective Equipment:

- 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

Fire/Explosion Hazard:

Decomposition may produce toxic fumes of: Carbon Dioxide and Oxides of Coper and Zinc

Hazchem Code:

Not regulated

Section 6: ACCIDENTAL RELEASE MEASURES**PERSONAL PRECAUTIONS**

Wear suitable protective clothing, **See section 8**

ENVIRONMENTAL PRECAUTIONS

Do not allow container or product to enter drains, sewers, streams or ponds. If contamination occurs advise local emergency services **See Section 12**

SPILLS & CONTAINMENT**Minor Spill**

- Potential Environmental Hazard – Contain Spill
- Allow only trained personnel wearing appropriate protective equipment to be involved in spill response.
- Avoid accidents, clean up immediately.
- Increase ventilation.
- 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.

Major Spill

- **Medium Hazard**
- Potential Environmental Hazard – Contain Spill
- CAUTION: Advise personnel in area / surrounding area
- Contact Emergency Services [111], inform them of location and nature of hazard
- Allow only trained personnel wearing appropriate protective equipment to be involved in spill response.

DISPOSAL

- Reuse if possible
- Spill on areas other than pavement, dirt or sand may be handled by removing the affected soils and placing into approved containers
- Transfer to suitable, labelled, corrosion-resistant containers and dispose of promptly as hazardous waste.
- Dispose of in accordance with local and national regulations

Section 7: HANDLING AND STORAGE**HANDLING PRECAUTIONS****Safe Handling**

- Ensure an eye bath and safety shower are available and ready to use.
- Avoid Personal contact, including inhalation
- Wear protective clothing when risk of exposure occurs
- Use in well ventilated area
- Keep out of reach of children

Certified Handler: Not required**Tracking:** Not required**Record Keeping:** Not required**STORAGE PRECAUTIONS****Suitable Container:**

- **Store in manufacturers original packaging**

Safe Storage:

- Store in original containers
- Keep containers closed when not in use
- Store in a cool, dry, well ventilated place
- Keep out of direct sunlight.
- Store away from sources of heat or ignition.
- Check regularly for spills.
- Store away from incompatible materials, foodstuff and containers

Storage Incompatibility:

- Strong Acids

Other Information:

- Dispose of in accordance with regulatory authority, local and national guidelines.
- Always read label before use.

Section 8: EXPOSURE CONTROL / PERSONAL PROTECTION

These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application.

CONTROL PARAMETERS**Ingredient Data:**

Source	Ingredient	TWA	STEL	Notes
NZ Workplace Exposure Standards [WES]	Borax Pentahydrate	1 mg/m ³		
	Manganese and inorganic compounds	0.15 mg/m ³		
	Copper Sulphate	1 mg/m ³		
Particulates not otherwise classified		10mg/m ³	Not Available	Inspirable dust
Particulates not otherwise classified		3mg/m ³	Not Available	Dust

EXPOSURE CONTROLS**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:



Hand Protection



Eye Protection



Protective Clothing



Respirator Protection



Foot Protection

Eye & Face Protection:

- Chemical goggles
- Restrict use of contact lenses.

Skin Protection:

- Wear chemical resistant gloves
- Always wash hands before eating, drinking or using facilities
- Protective footwear

Respiratory Protection:

- Particulate. [AS/NZ 1716, EN 143:2000 & 149:001, ANSI Z88 or national equivalent]

Body Protection:

- Overalls
- Barrier cream

Other Protection:

- Eyewash Unit

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Powder	Vapour Density [Air=1]:	n/a
Physical State:	Solid	Relative Density [Water=1]:	n/a
Odour:	Odourless	Auto Ignition Temp [°C]:	Not self-igniting
Odour Threshold:	n/a	Decomposition Temp:	n/a
pH [1% Solution]:	n/a	Viscosity [cSt]:	n/a
Melting Point / Freezing Point:	n/a	Molecular Weight [g/mol]:	n/a
Initial Boiling Point / Range:	n/a	Taste:	n/a
Flash Point [°C]:	n/a	Explosive Properties:	Not explosive
Evaporation Rate:	n/a	Oxidising Properties:	Not oxidising
Flammability:	n/a	Surface Tension [mN/m]:	n/a
Upper Explosive Limit [%]:	Not explosive	Volatile Component [%vol]:	n/a
Lower Explosive Limit [%]:	Not explosive	Gas Group:	n/a
Vapour Pressure [kPa]:	Negligible	VOC g/l:	n/a
Solubility in water [g/l]:	Soluble		

Section 10: STABILITY AND REACTIVITY

Stability:	Product is stable under normal conditions of use, storage and temperature
Reactivity:	None known
Conditions to avoid:	Moisture.
Incompatibility:	Avoid strong acids
Hazardous Decomposition:	May release Carbon Dioxide, Oxides of Coper and Zinc on decomposition

Section 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL EFFECTS

No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms or effects that may arise if the product is mishandled and overexposure occurs are:

Ingestion:	Swallowing large quantities may cause irritation to stomach and large intestine		
Inhalation:	Dust may cause irritation to respiratory tract		
Skin:	May be irritating to skin		
Eye:	May cause irreversible eye damage / irritation		
Chronic Effects:	No data available		
Acute Toxicity:	✓	Carcinogenic:	✗
Skin Irritation/ Corrosion:	✗	Reproductive Effects:	✓
Serious Eye Damage/Irritation:	✓	Specific Target Organ – SE:	✓
Respiratory / Skin Sensitiser:	✗	Specific Target Organ – RE:	✓
Mutagenic:	✗	Aspiration Hazard:	✗

Legend:

- ⊙ Data not available to make classification
- ✓ Data Available to make classification
- ✗ Data available but does not fill criteria for classification

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TOXICOLOGICAL DATA:

No LD50 data available for the product. However, Exposure Standard(s) for constituent(s):

Product	Toxicity	Irritation
Borax Pentahydrate	Oral [Rat] LD50 3200 to 3500 mg/kg	No data available
Manganese Sulphate	Oral [Rat] LD50 21050 mg/kg	No data available
Zinc Sulphate	Oral [Rat] LD50 574 to 2949 mg/kg	Irritation to skin
Copper Sulphate	Oral [Rat] LD50 472.5 mg/kg	Skin [Rabbit] >8.0 g/kg
	Inhalation [Rat] LC50 >2.95 mg/l/h	
Sodium Molybdate	Oral [Rat] LD50 4000 mg/kg	
	Inhalation [Rat] LC50 >2.08 mg/l [4 hr]	

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Avoid contaminating waterways**Bioaccumulation** No data available

ECOLOGICAL DATA:

No LC50 data available for the product. However, Exposure Standard(s) for constituent(s):

Product	Endpoint	Duration [hr]	Species	Value
Borax Pentahydrate	LC50	96	Fish	79.7 B/l
	LC50	48	Daphnia	133 mg B/l
	EC50	72	Algae	40 mg B/l
Zinc Sulphate	LC50	96	Fish	2.4 mg/l
	EC50	48	Daphnia	0.56 mg/l
	EC50	72	Algae	0.05 – 0.36 mg/l
Copper Sulphate	LC50	96 hr	Fish	0.571 mg/l

Section 13: DISPOSAL INFORMATION

Disposal:

Refer to local government authority for disposal recommendations. Dispose of contents/container in accordance with local/regional/national/international regulations. Empty containers must be either rendered totally unusable, or if to be recycled for use, decontaminated by rinsing thoroughly with water. Rinsing water needs to be disposed of carefully

The following controls should be considered:

- Reduction
- Reuse
- Recycle
- Disposal

Disposal of materials or packaging must be carried out in accordance with Hazardous Substances Regulations 2001

Section 14: TRANSPORT INFORMATION

LABELLING REQUIREMENTS

Label: None

Marine Pollutant: Potential Marine Pollutant

Hazchem: Not regulated

LAND / AIR / SEA TRANSPORT

Not regulated for transport of Dangerous Goods [UN]

Section 15: REGULATORY INFORMATION

REGULATIONS

EPA Approval Number: HSR002571

Group Standard: Fertilizers [Subsidiary Hazard] Group Standard 2020

HSNO Classification:

- 6.1D:** Substances that are acutely toxic - Harmful.
6.8B: Substances that are suspected human reproductive or developmental toxicants
6.9A: Substances that are toxic to human target organs or systems
6.9B: Substances that are harmful to human target organs or systems
8.3A: Substances that are corrosive to ocular tissue
9.1C: Substances that are harmful in the aquatic environment
9.3C: Substances that are harmful to terrestrial vertebrates

LOCATION TEST CERTIFICATE

Hazard Class	Closed Container Controls	Open Container Controls
Not required	Not required	Not required

TRACKING REQUIREMENTS

Not applicable

Section 16: OTHER INFORMATION**ABBREVIATIONS**

ACVM:	Agricultural Compounds and Veterinary Medicines
Approval Code:	HSNO Approval number for Group Standard
CAS Number	Unique Chemical Abstracts Service Registry Number
EC50:	Ecotoxic Concentration 50% - concentration in water which is fatal to 50% of a test population [e.g. daphnia, fish species]
EPA:	Environmental Protection Authority [New Zealand]
GHS:	Globally Harmonised System of Classification and Labelling of Chemicals
HAZCHEM Code:	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
HSNO:	Hazardous Substances and New Organisms [Act and Regulations]
HSR Number:	HSNO Approval number for Group Standard
IARC:	International Agency for Research on Cancer
LEL/UEL:	Lower Explosive Limit / Upper Explosive Limit
LD50:	Lethal Dose 50% - concentration in air which is fatal to 50% of a test population [Rats]
LC50:	Lethal Concentration 50% - concentration in air which is fatal to 50% of a test population [Rats]
NOEC:	No Observed Effect Concentration
NZIoC:	New Zealand Inventory of Chemicals
SDS [MSDS]:	Safety Data Sheet or Material Safety Data Sheet
STEL:	Short Term Exposure Limit – The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15-minute period, provided the TWA is not exceeded
TWA:	Time Weighted Average – generally referred to WEES average over typical workday [8 hours, 5 days a week]. The WES relates to exposure that has been measured by personal monitoring using procedures that gather air samples in the workers breathing zone.
UN Number:	United Nations Number
WES:	Workplace Exposure Standard – The airborne concentration of a biological or chemical agent to which a worker may be exposed during work hours

REFERENCES

- Data: Unless otherwise stated comes from the EPA HSNO chemical classification information database [CCID]
 Controls: EPA notices www.epa.govt.nz, Health & Safety at Work [Hazardous Substances] Regulations 2017, www.legislatin.govt.nz
 WES: The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their website – www.worksafe.govt.nz
 Other References: Suppliers SDS, EU ECHA, ingredients SDS's

This Safety Data Sheet was updated on the date shown at the bottom right of page, and supersedes all previous versions.

The data in this SDS relates only to the specific material designated herein and does not relate to use in combination with any other material. The information is provided in good faith based on current knowledge and experience. No warranty with regard to the product properties is expressed or implied.

All reasonable care has been taken to ensure that the information and advice contained herein are from sources believed to be reliable and to represent the most up-to-date knowledge available at the given Review Date [bottom right of pages]. No liability is assumed for damages related to the use or misuse of this substance.

All chemical materials may present unknown hazards as people have varying degrees of sensitivity to chemicals. Therefore, this product should be used with caution. The information herein is given in good faith, but no warranty, express or implied is made.

END OF SAFETY DATA SHEET