Safety Data Sheet

1. IDENTIFICATION OF SUBSTANCE/MIXTURE AND COMPANY

1.1 Product identifier
TX Trace
1.2 Relevant identified uses of the substance or mixture and uses advised against
Recommended uses — Professional use as fertiliser
1.3 Details of the supplier of the safety data sheet
Terralift Australia, 11 North Wainwright Rd, Athol, QLD 4350, Australia
T: 1300551944 F: (02)49135419 E: admin@terralift.com.au
1.4 Emergency telephone number
Tel: 1300551944

2. HAZARDS IDENTIFICATION

2.1 Poisons schedule: Not scheduled
2.2 Hazard classification:
Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)
Skin corrosion or irritation – Category 2 (H315)
Eye irritation – Category 2 (H319)
Chronic aquatic toxicity – Category 3 (H412)
2.3 Label elements
Pictogram(s)

Signal word:	WARNING
Hazard statements:	H315: Causes skin irritation H319: Causes serious eye irritation H412: Harmful to aquatic life with long lasting effects
Precautionary statements:	P264: Wash hands/skin thoroughly after handling P280: Wear protective gloves/eye protection P302+P352: IF ON SKIN: wash with plenty of water P362+P364: Take off contaminated clothing and wash before reuse P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing P337+P313: If eye irritation persists, get medical advice/attention P273: Avoid release to the environment P391: Collect spillage P501: Dispose of contents/container in accordance with local regulations.
Other hazards:	None

3. COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous ingredients:

Substance	CAS number	Hazard classification (GHS):	Weight %
Iron Sulphate	7782-63-0	Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Acute Tox. 4 (H302)	10-25%
Manganese Sulphate	10034-96-5	STOT(RE) (H373) Aquatic Chronic 2 (H411)	5-10%
Copper Sulphate	7758-99-8	Acute Tox. 4 (H302) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) Aquatic Chronic 1 (H410)	1-3%
Zinc Sulphate	7446-19-7	Acute Tox. 4 (H302) Eye Dam. 1 (H318) Aquatic Acute 1 (H400)	1-3%

4. FIRST AID MEASURES

4.1 Description of first aid measures

General advice	Show this SDS to the doctor in attendance.
Inhalation	Move the exposed person to fresh air at once. Get medical attention. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.
Skin Contact:	Remove affected person from source of contamination. Get medical attention promptly if symptoms occur after washing. Remove contaminated clothes and rinse skin thoroughly with water.
Eye Contact:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Ingestion:	Do not induce vomiting. Never make an unconscious person vomit or drink fluids. Remove victim immediately from source of exposure. Drink plenty of water and seek medical aid immediately.

4.2 Most important symptoms and effects, both acute and delayed

Inhalation	Irritation of nose, throat and airway. Prolonged or frequent inhalation of vapours in high concentrations may cause permanent damage to the nervous system, including the brain.
Ingestion	May cause gastrointestinal irritation, diarrhoea, nausea, vomiting.
Skin contact	May cause skin irritation/eczema (the hazard is low for usual industrial handling).
Eye contact	May cause blurred vision and serious eye damage.

4.3 Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically

5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media	Use water, water spray, dry powder, foam or carbon dioxide.
Unsuitable extinguishing media	High volume water jet. Extinguishers of the chlorinated hydrocarbon variety are not recommended as toxic products may be produced by the decomposition of the extinguishing medium when it comes into contact with hot manganese compounds.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products:	When heated and in case of fire, irritating vapours/gases may be formed. In case of fire, toxic gases may be formed.

5.3 Advice for fire fighters

Self contained breathing apparatus and full protective clothing must be worn in case of fire. Coordinate fire extinguishing measures to fire in surrounding area. Keep run-off water out of sewers and water sources. Dike for water control.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Personal precautions:	Provide adequate ventilation. Use protective gloves, goggles and suitable protective clothing. Evacuate personnel to safe areas.
For emergency responders	Use personal protection recommended in section 8.

6.2 Environmental precautions

Prevent material or washings entering water courses.

6.3 Methods and material for containment and cleaning up

Methods for containment	Sweep up spills carefully to minimise dust/spread of material.
Methods for clean-up	Transfer to heavy-duty plastic bags or drums and keep safe for disposal. If material is uncontaminated reuse as recommended for product.

6.4 Reference to other sections

Section 8 and 13

7. HANDLING & STORAGE

7.1 Precautions for safe handling

General occupational hygiene advice	Handle in accordance with good industrial hygiene and safety practice. Use personal protection recommended in Section 8. When using, do not eat, drink or smoke.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures/storage conditions	Store in original containers, tightly closed in a secure, well ventilated area.
Packaging materials:	20kg polythene bags
Other advice	For quality reasons store under dry conditions, out of direct sunlight, do not double stack pallets of product. Shelf life 2 years. Partly used bags should be closed well.

7.3 Specific end use(s)

Specific uses	Fertiliser. Follow label instructions.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Exposure standards

Ingredient	Reference	TWA (8hr)		STEL	
		ppm	mg/m^3	ppm	mg/m^3
Iron sulphate	SWA (AUS)	-	1	-	-
Manganese sulphate	SWA (AUS)	-	1	-	-
Copper sulphate	SWA (AUS)	-	1	-	-
Zinc sulphate	SWA (AUS)	-	-	-	-

8.2 Exposure controls

Personal protective equipment

Eye / face protection:	At high dust levels, wear safety glasses.
Skin and body protection:	When using large quantities or where heavy contamination is likely, wear coveralls.
Respiratory protection:	Where an inhalation risk exists, wear a Class P1 (Particulate) respirator.
Hand protection:	Individuals with sensitive skin should consider wearing PVC or rubber gloves.
Work / Hygienic practices:	Wash hands before eating, drinking or smoking.
Environmental exposure controls	Local authorities should be advised if significant spillages cannot be contained. Do not allow into any sewer, on the ground or into any body of water.

9. PHYSICAL & CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance:	Homogenous granule, brown
Odour:	Light odour
pH:	4.0-4.5

Melting point/freezing point	No data available
Boiling point/range	No data available
Flash point:	Not applicable
Evaporation rate	Not applicable
Flammability (solid, gas):	Non-flammable
Vapour pressure:	Not applicable
Vapour density	Not applicable
Specific gravity:	760g/l
Water solubility:	Slightly soluble
Solubility(ies)	No data available
Partition coefficient	Not applicable
Auto ignition temperature	Not applicable
Decomposition temperature	No data available
Explosive properties	Does not present explosion hazard (based on data of ingredients)
Oxidising properties:	No data available

9.2 Other information

Not applicable

10. STABILITY & REACTIVITY

10.1 Reactivity

Not reactive.

10.2 Chemical stability

Stable under normal conditions

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Water, moisture. Toxic gases are generated when heated.

10.5 Incompatible materials

Strong acids. Strong oxidising substances. Powdered metal. Inorganic peroxides.

10.6 Hazardous decomposition products

Sulphurous gases (SOx). Oxides of Manganese.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Information on the Likely Routes of Exposure (inhalation, ingestion, skin and eye contact):

In case of ingestion:	May cause discomfort if swallowed.
In case of skin contact:	May cause skin irritation.
In case of inhalation:	Prolonged inhalation of high concentrations may damage respiratory system.
In case of eye contact:	May cause irritation to the eyes

Symptoms related to the physical, chemical and toxicological characteristics:

No information available

Acute toxicity

ATEmix (oral) = 2,174mg/kg (calculated)

Ingredients	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ferrous sulphate $FeSO_4.7H_2O$	657-4390 mg/kg (rat)	>1992 mg/kg (rat)	No relevant data available
Manganese sulphate $MnSO_4.H_2O$	2150 mg/kg (rat)	No relevant data available	No relevant data available
Zinc sulphate H_2O $4S.H_2O.Zn$	No relevant data available	No relevant data available	No relevant data available
Copper sulphate $CuSO_4.5H_2O$	482 mg/kg (rat)	>2000 mg/kg (rat)	No relevant data available

Delayed and Immediate Effects as well as Chronic Effects from Short and Long-Term Exposure:

Skin corrosion/irritation	No information available
Serious eye damage/eye irritation	No information available

Respiratory or skin sensitisation	No information available
Germ cell mutagenicity	No information available
Carcinogenicity	No information available
Reproductive toxicity	No information available
STOT-single exposure	No information available
STOT-repeated exposure	No information available
Aspiration hazard	No information available

Absence of specific data

No test data is available for the mixture as a whole. Data on ingredient substances has been provided where relevant.

12. ECOLOGICAL INFORMATION

12.1 Toxicity

Ecotoxicity: Toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

Unlikely to accumulate in the environment (based on ingredient properties)

12.3 Bio accumulative potential

Low potential (based on ingredient properties)

12.4 Mobility in soil

Low potential for adsorption (based on ingredient properties)

12.5 Results of PBT and vPvB assessment

No information available

12.6 Other adverse effects

No information available

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product / packaging disposal: Dispose of waste and packaging through a waste disposal contractor in accordance with local laws.

14. TRANSPORT INFORMATION

Not Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

14.1 UN-No:	Not regulated
14.2 Proper shipping name	Not regulated
14.3 Hazard class	Not regulated
14.4 Hazard group	Not regulated
14.5 Packing group	Not regulated
14.6 Marine pollutant	Not regulated
14.7 Environmental hazards	Not regulated
14.8 Special provisions for user	None

15. REGULATORY INFORMATION

15.1: General information	No data available
15.2 Poisons schedule	Not scheduled
15.3 Australian Inventory of Chemical Substances (AICS)	Not listed

16. OTHER INFORMATION

Abbreviations and acronyms used in the safety data sheet

ATE: Acute Toxicity Estimate
CAS: Chemical Abstracts Service
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
OEL: Occupational Exposure Limit
STEL: Short-term exposure limit
TWA: Time Weighted Average

Classification procedure - Calculation method

- Test data
- Expert judgment and weight of evidence determination

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