



SAFETY DATA SHEET

Section 1.	Identification of the material and the supplier
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Product:	CarboIron
Other means of Identification	Liquid Micronutrient Fertiliser
Product Use:	The user should seek the advice of the county agricultural representative or a professional agricultural consultant.
Restriction of Use:	Refer to Section 15
New Zealand Supplier:	Hortigro Ltd
Address:	164 Manukau Road Pukekohe Auckland, 2120
Telephone:	+64 9 2371777
Emergency No:	0508673800 0800 764 766 (National Poison Centre)
Date of SDS Preparation:	1 December 2017

Section 2.	Hazards Identification
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This substance is hazardous according to the Hazardous Substances (Classification) Notice 2017

EPA Approval No: HSR005613

Pictograms



Irritant

Signal Word: **Warning**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.1E (oral)	H303	May be harmful if swallowed.	Category 5
6.3A	H315	Causes skin irritation.	Category 2
6.4A	H319	Causes serious eye irritation.	Category 2A

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P264	Wash hands thoroughly after handling.
P280	Wear protective clothing.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P312	Call a POISON CENTER or doctor/physician if you feel unwell.
P362	Take off contaminated clothing and wash before re-use.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
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.

Storage Code	Storage Statement
None allocated	

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

Section 3. Composition / Information on Hazardous Ingredients

Ingredients	Wt%	CAS NUMBER.
Ferrous Sulphate Heptahydrate	10-11	7782-63-0
Non hazardous	To bal	

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	Rinse mouth. 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. Apply artificial respiration if not breathing. Get medical advice if breathing becomes difficult.

Most important symptoms and effects, both acute and delayed

Symptoms:

Ingestion:	If swallowed: can irritate the mouth, throat and stomach.
Skin:	Causes skin irritation.
Eye:	Causes severe eye irritation.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable
Hazards from combustion products	By heating and fire, irritating vapours/gases may be formed.
Suitable Extinguishing media	Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog.

Precautions for firefighters and special protective clothing	Approach fire from upwind to avoid hazardous vapours or gases. Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.
HAZCHEM CODE	None Allocated

Section 6. Accidental Release Measures

Wear protective gear as detailed in Section 8. Evacuate all unnecessary personnel.

Do not allow into any sewer, on the ground or into any waterway.

Small spills or leaks: contain and soak up spill with absorbent that does not react with spilled product. Place used absorbent into suitable, covered, labelled containers for disposal. Large spills or leaks: dike spilled product to prevent runoff. Remove or recover liquid using pumps or vacuum equipment. Do not return spilled product to its original container.

Dispose of waste according to the applicable local and national regulations.

Section 7. Handling and Storage

Precautions for Handling:

- Keep out of reach of children.
- Read label before use.
- Use in a well-ventilated area.
- Do not breathe vapours or mists.
- Avoid contact with eyes, skin and clothing. Do not wear contact lenses while handling this material.
- Keep away from extreme heat and flame. Use caution when opening containers.
- Wash hands thoroughly after handling.
- Wear protective clothing.
- Use personal protective equipment as required.

Precautions for Storage:

- Store away from incompatible materials listed in Section 10.
- Store in an area that is: well-ventilated.
- Store in the original, labelled, shipping container.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m ³	ppm	mg/m ³

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 2017 9TH EDITION.

Engineering Controls

Use local exhaust ventilation, if general ventilation is not adequate to control amount in the air.

Personal Protection Equipment



Eyes	Wear chemical safety goggles with side shields. Avoid wearing contact lenses.
Skin	Wear chemical protective clothing e.g. gloves, aprons, boots.
Respiratory	In case of inadequate ventilation or risk of inhalation of vapours, use suitable respiratory equipment.

Section 9 Physical and Chemical Properties

Appearance	Liquid
Colour	Dark black
Odour	Musty
Odour Threshold	Not available
pH	6 - 7 (1% solution)
Boiling Point	Not available
Melting Point	Not available
Freezing Point	Not available
Flash Point	Not available
Flammability	Not available
Upper and Lower Explosive Limits	Not available
Vapour Pressure	Not available
Vapour Density	Not available
Relative Density	1.21 - 1.22 at 20 °C (water = 1)
Water Solubility	Soluble in water
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Kinematic Viscosity	Not available
Particle Characteristics	Not available

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Possibility of hazardous reactions	Not reactive under normal conditions of use.
Conditions to Avoid	Prolonged exposure to high temperatures. Incompatible materials.
Incompatible Materials	Oxidizing agents (e.g. peroxides), strong acids (e.g. hydrochloric acid).
Hazardous Decomposition Products	None expected under normal conditions of storage and use. Reacts in the presence of oxidizing agents.

Section 11 Toxicological Information

Acute Effects:

Swallowed	May be harmful if swallowed. May be harmful irritation of the mouth, throat and stomach.
Dermal	Not applicable.
Inhalation	Not applicable.
Eye	Causes serious eye irritation.
Skin	Causes skin irritation. Repeated or prolonged exposure can irritate or burn the skin.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Ferrous Sulphate Heptahydrate		> 2000 mg/kg (rat)	

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.

Section 12. Ecotoxicological Information

This product is not hazardous to the environment.

Acute Aquatic Toxicity

Chemical Name	LC50 Fish	EC50 Crustacea	ErC50 Aquatic Plants	ErC50 Algae
Ferrous Sulphate Heptahydrate	0.41 mg/L (96-hour)			

Persistence and degradability	No data available
Bioaccumulation	No data available
Mobility in Soil	No data available
Other adverse effects	No data available

Section 13. Disposal Considerations**Disposal Method:**

Triple rinse and dispose according to Local Regulations.

Precautions or methods to avoid: None known.

Section 14 Transport Information

This product is NOT classified as a Dangerous Good for transport in NZ ; NZS 5433:2012

Section 15 Regulatory Information

This substance is classified hazardous according to the Hazardous Substances (Classification) Notice 2017

EPA Approval Code: HSR005613

HSNO Classification: 6.1E(oral), 6.3A, 6.4A

HSW (HS) Regulations 2017 and EPA Notices	Trigger Quantity
Certified Handler	Not required
Location Certificate	Not required
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	Not required
Emergency Response Plan	Not required
Secondary Containment	Not required
Restriction of Use	Only use for the intended purpose.

Product Name: CarboIron
Date of SDS: 1 December 2017

Prepared by: Technical Compliance Consultants (NZ) Ltd
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Glossary

EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
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. HSNO Approved Code of Practice: 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

Disclaimer

This document has been prepared by TCC (NZ) Ltd and serves as the suppliers 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

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

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