

SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: Magnesium Nitrate Horticultural Grade
 Product No:
 Product Use: Fertiliser
 Restrictions 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

New Zealand: **0800 764 766 (National Poison Centre)**

Date of SDS Preparation: 31 July 2023

Section 2. Hazards Identification

This substance is NOT hazardous according to the EPA Hazardous Substances (Classification) Notice 2020

Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
Magnesium nitrate, hexahydrate	99%	13446-18-9

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes Wash eyes with plenty of running water for at least 15 minutes, keep the eyelids open and occasionally lifting the upper and lower eyelids. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical assistance if needed.

If on Skin Remove contaminated clothing and shoes. Rinse with skin running water after washing with soap or skin cleanser. Seek medical assistance if needed.

If Swallowed Rinse mouth, give 2-3 glasses of water to drink. Never give anything by mouth to an unconscious person. Keep the person warm and rest, 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: None known.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable
Hazards from combustion products	In case of fire, the following can be released: Nitrogen oxides (NO _x). During the thermal decomposition produced of harmful compounds. Brown fumes containing toxic nitrogen oxides.
Suitable Extinguishing media	Use water only! Contact professional fire-fighters immediately. For small fires, do NOT use chemicals, carbon dioxide, halon or foams. For large fires flood fire with water from a distance.
Precautions for firefighters and special protective clothing	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Clothing resistant to high temperatures. Independent self-contained breathing apparatus. High temperatures may cause pressure build-up in closed containers. Reduce dust and vapour with water spray.
HAZCHEM CODE	None allocated

Section 6. Accidental Release Measures

Wear PPE as detailed in Section 8. Avoid contact with eyes. Do not let this chemical enter the environment. Do not ingest.

Prevent the material from entering surface water. Avoid direct discharge into drains.

Use appropriate tools to put the spilled solid in a convenient waste disposal container. If necessary: Collect up the product and place it in a sealable container. Suitably labeled. Transfer carefully to container. Then take the spare containers to an area reserved for subsequent recycling or disposal. Do not put the cast down material back into the original container, for re-use. Avoid prolonged or repeated exposure.

Section 7. Handling and Storage

Handling

- Read carefully and follow all instructions.
- Keep in original containers in a covered warehouse.
- Storage in dry area.
- Protect from direct sunlight.

Storage

- Keep away from incompatibles such as reducing agents, flammable agents, strong acids. Keep away from foodstuffs, beverages and feed.
- Keep away from heat and sources of ignition.

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 APRIL 2022 13TH EDITION.

Derived No Effect Level (DNEL)

	Workers	General population
Oral ¹	Not applicable	12,5 mg/kg bw/d
Dermal ¹	20,8 mg/kg bw/day	12,5 mg/kg bw/day
Inhalation ¹	36,7mg/m ³	10,9 mg/m ³

Predicted No Effect Level (PNEC)²

Aqua-freshwater	0.45 mg/l
Aqua-marine water	0.045 mg/l
Aqua-intermittent release	4.5 mg/l
STP	18 mg/l

Magnesium Nitrate Horticultural Grade

1: As the substance is classified for acute oral toxicity an acute DNEL should be derived for the general population. However, peak exposure is considered not possible and therefore an acute DNEL systemic will not be derived. Therefore, the long-term DNEL is considered sufficient to ensure that effects from acute oral exposure to the substance do not occur. As an dermal and inhalation acute toxicity hazard leading to Classification and Labelling of the substance has not been identified, the long-term DNEL is considered sufficient to ensure that effects from acute exposure to the substance do not occur (in accordance with ECHA Guidance on information requirements and chemical safety assessment: Chapter R.8: Characterisation of dose [concentration]-response for human health, May 2008 and Part B: Hazard Assessment, Draft new chapter B.8 Scope of Exposure Assessment, March 2010).

2: PNEC sediment/soil/oral are not derived as these are not applicable/not relevant.

Engineering Controls

None known.

Personal Protective Equipment

Eyes	Use safety goggles.
Hands	The selected protective gloves have to satisfy the specifications EN 374.
Skin	Use work clothes and shoes.
Respiratory	Use respirator or dust-proof mask. In case of emergency or evacuation, wear an air breathing apparatus.
General	Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with eyes.

Section 9 Physical and Chemical Properties

Appearance	Solid
Colour	White, White-yellow
Odour	Not available
Odour Threshold	Not available
pH (1% solution)	5 – 7.5
Boiling Point	Not available
Melting/Freezing Point	95°C at 1013 hPa
Crystallisation temp	Not available
Flash Point	Not available
Flammability	Not flammable
Upper and Lower Explosive Limits	Not available
Vapour Pressure	<0.00001 Pa at 20 ° C

Relative / Bulk Density	1,46 g/cm ³ / 900 kg/m ³ ± 5%
Solubilities	Soluble in water
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Dynamic Viscosity	Not available
Particle Characteristics	90% > 2 mm

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Reactivity	Reactive with strong reducing agents.
Conditions to Avoid	Avoid contact with strong heat sources such as solar radiation and flames.
Hazardous Reactions	The substance reacts with strong reducing agents.
Incompatible Materials	Strong reducing agents.
Hazardous Decomposition Products	Intensive heated to temperatures > 330°C followed by decomposition with emission of toxic gases (nitrogen oxides).

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable. LD50 (oral):> 2000 mg / kg
Dermal	Not applicable. LD50 (dermal):> 5000 mg / kg
Inhalation	Not applicable.
Eye	Not applicable.
Skin	Not applicable.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable. NOAEL ≥ 1500 mg/kg bw/day (orally)
Germ Cell Mutagenicity	Not applicable.
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Not applicable.

Section 12. Ecotoxicological Information

Not classified as dangerous to the environment.

Product:	
Persistence and degradability	Decomposition under anaerobic conditions in wastewater treatment plants.
Bioaccumulation	The substance has a low potential for biodegradation.
Mobility in Soil	Freely soluble in water. Very quickly penetrates into the groundwater.
Other adverse effects	No data available

Magnesium Nitrate Hexahydrate

There is no direct test for magnesium nitrate.

The data were based on studies of similar substances.

LC50 for freshwater fish: 1378 mg / L

Product Name: Magnesium Nitrate Horticultural Grade
Date of SDS: 31 July 2023

SDS Prepared by: Technical Compliance Consultants (NZ) Ltd
www.techcomp.co.nz Tel: 64 9 475 5240

EC50/LC50 for freshwater invertebrates:	490 mg / L
EC50/LC50 for freshwater algae:	> 1700 mg / L
EC10/LC10 or freshwater algae	NOEC: 1700 mg / L E
C50/LC50 aquatic microorganisms:	> 1000 mg / L
EC10/LC10 or NOEC aquatic organisms:	180 mg / L
PNEC aqua (water freshwater):	0.45 mg / L
PNEC aqua (sea water):	0.045 mg / L
PNEC (broken version):	4.5 mg / L

Section 13. Disposal Considerations

Disposal Method:

Waste Removal: Apply as fertilizer or transfer for disposal.

Disposing of the packaging: Empty containers contain residue of material on the inner surfaces. Thoroughly empty containers to be transmitted to authorized waste collector Empty packaging completely.

Precautions or methods to avoid: Prevent pollution of surface waters.

Section 14 Transport Information

This product is NOT classified as a Dangerous Good for transport in NZ ; NZS 5433:2020 and SNZ HB 5433:2021

Section 15 Regulatory Information

This substance is NOT hazardous according to the 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 2022 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
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

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: 31 July 2023 Review Date: 31 July 2028