

SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

Product: **RhizoVital42**
 Item Code:
 Product Use: Microbial biofertilizer, soil enhancer
 Restriction 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

Emergency Telephone: 0800 764 766 (National Poison Centre)

Date of SDS Preparation: 1 August 2019

Section 2. Hazards Identification

This substance is NOT hazardous according to the EPA Hazardous Substances (Classification) Notice 2017

Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
Non-hazardous ingredients	To 100	-

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes: Rinse cautiously with water for 15 minutes. If eye irritation persists call doctor/physician.

If on Skin: Wash skin with plenty of soap and water. If skin irritation occurs: Get medical advice/attention.

If Swallowed: Wash out mouth 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. Call a POISON CENTER or doctor/physician if you feel unwell.

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.

Treatment: Treat symptomatically.

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable, Non-combustible material.
Hazards from decomposition products	Vapors cause coughing.
Suitable Extinguishing media	Water mist, foam, dry powder, carbon dioxide. Do not use water-jet.
Precautions for firefighters and special protective clothing	No special requirements. Avoid contact with oxidizing agents. Cool closed containers with water.
HAZCHEM CODE	None allocated

Section 6. Accidental Release Measures

Use personal protective equipment as detailed in Section 8. Keep unnecessary and unprotected personnel from entering.

Collect as much as possible in a clean container for (preferable) reuse or disposal. Dispose of according to Local Regulations as detailed in Section 13.

Section 7. Handling and Storage

Precautions for Handling:

- Read label before use.
- No special precautions, just usual precautions with handling chemicals should be observed.

Precautions for Storage:

- Avoid contact with oxidizing agents.
- To maintain quality store <20⁰C.
- Avoid elevated temperatures.

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

Ensure adequate ventilation.

Personal Protection Equipment

Eyes	Not required
Hands and Skin	Not required
Respiratory	Not required

Section 9 Physical and Chemical Properties

Appearance	Liquid (20 ⁰ C)
Colour	Yellow-brownish
Odour	Specific earthy
Odour Threshold	Not available
pH	6.5 - 7
Boiling Point	Not available
Melting Point	Not applicable
Freezing Point	Not freezing
Flash Point	> 100 °C
Flammability	The product is not flammable.
Upper and Lower Explosive Limits	Not available
Vapour Pressure	< 0.1 Pa (20°C)
Vapour Density	Not available
Density	approx. 1.03 kg/L (20°C)
Solubilities	Soluble in water
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not applicable
Viscosity	12,3 mPa x s
Particle Size	Not available

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions of storage and use.
Hazardous Reactions	Not reactive.
Conditions to Avoid	Temperature > 100°C.
Incompatible Materials	Avoid contact with oxidizing agents.
Hazardous Decomposition Products	None known.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable. LD50 = >2000mg/kg
Dermal	Not applicable.
Inhalation	Not applicable.
Eye	Not applicable.
Skin	Not applicable.

Chronic Effects:

Carcinogenicity	Not applicable.
Reproductive Toxicity	Not applicable.
Germ Cell	Not applicable.

Mutagenicity	
Aspiration	Not applicable.
STOT/SE	Not applicable.
STOT/RE	Not applicable.

Section 12. Ecotoxicological Information

This product is not hazardous to the environment.

Persistence and degradability	Biodegradable.
Bioaccumulation	not persistent, not bio-accumulated.
Mobility in Soil	Potential absorptiveness in the top organic soil layers and very little capacity to leach to lower layers.
Ecotoxicity	
Fish (<i>Oncorhynchus mykiss</i>)	96h LC50: > 100 mg product/l
Invertebrate species (<i>Daphnia magna</i>)	48h EC50: > 100 mg product/l
Algae (<i>Desmodesmus subspicatus</i>)	72h EC50: > 100 mg product/l
Aquatic plant (<i>Lemna gibba</i>)	07d EC50: > 100 mg product/l

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 NOT hazardous according to the EPA Hazardous Substances (Classification) Notice 2017

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

References:

1. EPA 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

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

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