

## SAFETY DATA SHEET

### Section 1. Identification of the material and the supplier

Product: **Vitanica Si**  
 Item Code:  
 Product Use: Fertiliser  
 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: 6 July 2020

### Section 2. Hazards Identification

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

**EPA Approval No: Fertiliser (Corrosive) – HSR002569**

#### Pictograms



Corrosive

Signal Word: **Danger**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.1E (oral)	H303	May be harmful if swallowed.	Acute Tox. 5
8.1A	H290	May be corrosive to metals.	Met. Corr. 1
8.2B	H314	Causes severe skin burns and eye damage.	Skin Corr. 1B
8.3A	H318	Causes serious eye damage.	Eye Corr. 1
9.3C	H433	Harmful to terrestrial vertebrates.	-

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P234	Keep only in original container.
P260	Do not breathe fumes, vapours and spray.

P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective clothing as detailed in Section 8.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P310	Immediately call a POISON CENTER or doctor/physician.
P363	Wash contaminated clothing before reuse.
P390	Absorb spillage to prevent material damage.
P301 + P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303 + P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
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 Code	Storage Statement
P405	Store locked up.
P406	Store in corrosive resistant container with a resistant inner liner.

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

### Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
Potassium Hydroxide	≥1 - <5	1310-58-3
Tripotassium Orthophosphate	≥5 - <10	7778-53-2
Disodium Metasilicate	≥10 - <30	6834-92-0

### 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. Immediately call a POISON CENTER or doctor/physician.
If on Skin	Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. Immediately call a POISON CENTER or doctor/physician.
If Swallowed	Rinse mouth with water. DO NOT induce vomiting. 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:	Refer to Section 11
<b>Ingestion:</b>	May be harmful if swallowed.
<b>Inhalation:</b>	Not applicable.

**Skin:** Causes skin burns  
**Eyes:** Causes severe eye damage.  
**Treatment:** Treat symptomatically.

### Section 5. Fire Fighting Measures

<b>Hazard Type</b>	Non Flammable, Non-combustible material.
<b>Hazards from decomposition products</b>	Hydrogen, by reaction with metals
<b>Suitable Extinguishing media</b>	Water and dry powder
<b>Precautions for firefighters and special protective clothing</b>	In the event of fire, wear self-contained breathing apparatus. In the event of fire and/or explosion do not breathe fumes. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
<b>HAZCHEM CODE</b>	<b>2R</b>

### Section 6. Accidental Release Measures

Wear appropriate protective clothing. Exclude non-essential people from the area. Keep people away from and upwind of spill/leak. In case of involuntary exposition of the product contact producer or supplier.

Do not empty into drains. Retain and dispose of contaminated wash water.

Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Dispose of according to Local Regulations detailed in Section 13.

### Section 7. Handling and Storage

#### Precautions for Handling:

- Read label before use.
- Keep only in original container.
- Do not breathe fumes, vapours and spray.
- Avoid contact with skin and eyes.
- Keep away from food, drink and animal feedingstuffs.
- Take off immediately all contaminated clothing.
- Wash hands thoroughly after handling.
- Avoid release to the environment.
- Wear protective clothing as detailed in Section 8.

#### Precautions for Storage:

- Keep out of reach of children.
- Store locked up.
- Store in corrosive resistant container with a resistant inner liner.
- Keep away from water and substances listed in section 10 "materials to avoid".
- Keep containers tightly closed in a cool, well-ventilated place.
- Metal containers must be lined.
- Keep away from strong bases.

### Section 8 Exposure Controls / Personal Protection

#### WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	TWA		STEL	
	ppm	mg/m <sup>3</sup>	ppm	mg/m <sup>3</sup>

Product Name: Vitanica Si  
Date of SDS: 6 July 2020

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

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 2019 11TH EDITION.

### Engineering Controls

Ensure adequate ventilation is available.

### Personal Protection Equipment



<b>Eyes</b>	Tightly fitting safety goggles (splash goggles) (EN 166)
<b>Skin</b>	: Chemical resistant protective gloves (EN 374). chloroprene rubber (CR) - 0.5 mm coating thickness. Long sleeved clothing.
<b>Respiratory</b>	Breathing apparatus needed only when aerosol or mist is formed.
<b>General</b>	Handle in accordance with good industrial hygiene and safety practice. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin and eyes. When using do not eat or drink.

## Section 9 Physical and Chemical Properties

<b>Appearance</b>	Liquid
<b>Colour</b>	Product specific
<b>Odour</b>	Characteristic
<b>Odour Threshold</b>	Not available
<b>pH</b>	Ca >12 (20°C)
<b>Boiling Point</b>	Ca >100°C
<b>Melting Point</b>	Not available
<b>Freezing Point</b>	Not available
<b>Flash Point</b>	Not available
<b>Flammability</b>	The product is not flammable.
<b>Upper and Lower Explosive Limits</b>	Not available
<b>Vapour Pressure</b>	Not available
<b>Vapour Density</b>	Not available
<b>Density</b>	ca. 1,233 g/cm <sup>3</sup> (20 °C)
<b>Solubilities</b>	Soluble
<b>Partition Coefficient:</b>	Not available
<b>Auto-ignition Temperature</b>	Not available
<b>Decomposition Temperature</b>	Not available
<b>Kinematic Viscosity</b>	Not available
<b>Particle Size</b>	Not available

## Section 10. Stability and Reactivity

<b>Stability of Substance</b>	This material is t stable when stored and used as directed.
<b>Hazardous Reactions</b>	No dangerous reaction known under conditions of normal use
<b>Conditions to Avoid</b>	None known.

<b>Incompatible Materials</b>	Metals Alkaline earth metals Acids.
<b>Hazardous Decomposition Products</b>	Hydrogen, by reaction with metals

## Section 11 Toxicological Information

### Acute Effects:

<b>Swallowed</b>	May be harmful if swallowed.
<b>Dermal</b>	Not applicable
<b>Inhalation</b>	Not applicable
<b>Eye</b>	Causes severe eye damage.
<b>Skin</b>	Causes skin burns.

### Chronic Effects:

<b>Carcinogenicity</b>	Not applicable.
<b>Reproductive Toxicity</b>	Not applicable.
<b>Germ Cell Mutagenicity</b>	Not applicable.
<b>Aspiration</b>	Not applicable.
<b>STOT/SE</b>	Not applicable.
<b>STOT/RE</b>	Not applicable.

### Individual component information:

#### Acute Toxicity:

Chemical Name	Oral – LD50	Dermal – LD50	Inhalation – LC50
potassium hydroxide	365 mg/kg (rat)	-	-
tripotassium orthophosphate	4500 mg/kg (rat)	>4640mg/kg (Rabbit)	-
disodium metasilicate:	1153 mg/kg (rat)	-	-

## Section 12. Ecotoxicological Information

HSNO Classes: 9.3C = Harmful to terrestrial vertebrates.

<b>Persistence and degradability</b>	No data available.
<b>Bioaccumulation</b>	No data available.
<b>Mobility in Soil</b>	No data available.
<b>Other adverse effects</b>	No data available.

### Components:

#### potassium hydroxide:

Toxicity to fish : LC50 (Fish): 50 - 165 mg/l  
Exposure time: 96 h

Toxicity to daphnia and other : EC50 (Daphnia magna (Water flea)): 30 - 1.000 mg/l aquatic invertebrates  
Exposure time: 48 h

#### tripotassium orthophosphate:

Toxicity to fish : LC50 (Gambusia affinis (Mosquito fish)): 750 mg/l  
Exposure time: 96 h

Do not allow to enter waterways.

## Section 13. Disposal Considerations

### Disposal Method:

Spent media that has removed toxic chemicals should be examined for specific hazards. Spilled product may be recovered for use if it has not come in contact with liquids or been exposed to significant amounts of gaseous contaminants. Dispose of according to Local Regulations.

Ensure any container holding waste product or contaminated spill media is labelled "Hazardous Waste – Corrosive" and that the label also has the Corrosive Pictogram, waste type identifier, and the business name, address, and phone number.

**Precautions or methods to avoid:** Avoid release to the environment.

## Section 14 Transport Information

**This product is classified as a Dangerous Good for transport in NZ ; NZS 5433:2012**



### Road, Rail, Sea and Air Transport

<b>UN No</b>	1719
<b>Class - Primary</b>	8
<b>Packing Group</b>	II
<b>Proper Shipping Name</b>	CAUSTIC ALKALI LIQUID, N.O.S. (potassium hydroxide)
<b>Marine Pollutant</b>	No
<b>Special Provisions</b>	If the product's individual container is below 1L, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

## Section 15 Regulatory Information

EPA Approval Code: Fertiliser (Corrosive) – HSR002569

HSNO Classification: 6.1E(oral), 8.1A, 8.2B, 8.3A, 9.3C

HSWA & EPA Controls	Trigger Quantity
Certified Handler	Not required
Location Certificate	250L (8.2B)
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	250L (8.2B)
Emergency Response Plan	1000L (8.2B)
Secondary Containment	1000L (8.2B)
Restriction of Use	None

## Section 16 Other Information

### Glossary

EC <sub>50</sub>	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
LC <sub>50</sub>	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD <sub>50</sub>	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

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:                   6 July 2020                   Review Date:                   6 July 2025