SAFETY DATA SHEET

According to
HSNO Hazardous Substances (Safety Data Sheets) Notice 2017

Section 1. Identification of the material and the supplier

Product:	**LignoHumate**
Product Use:	For agricultural use only. Not for human or animal consumption - A commercial agricultural product used to improve soil and/or plant health and for improved growth.
Restriction of Use:	Refer to Section 15
New Zealand Supplier:	**Waikaitu Limited**
Address:	28 Oxford Street Richmond Nelson, 7020
Website:	www.waikaitu.com
Telephone:	+64 3 970 0302
Emergency No:	**0800 764 766 (National Poison Centre)**
Date of SDS Preparation:	17 July 2020

Section 2. Hazards Identification

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

EPA Approval No: Fertilisers (subsidiary) – HSR002571

Pictograms

Toxic/Irritant

Signal Word: **Warning**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
6.1D (oral)	H302	Harmful if swallowed.	Acute Tox. 4
6.1E (dermal)	H313	May be harmful in contact with skin.	Acute Tox. 5
6.4A	H320	Causes eye irritation.	Eye Irrit. 2B

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.

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.
P330	Rinse mouth.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
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.

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.**
Hydroxide	<1.0	1310-73-2
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. If skin irritation occurs: get medical advice/attention.

If Swallowed — Wash out mouth thoroughly with water. Drink copious amounts of water and provide fresh air. 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: Harmful if swallowed
Inhalation: Not applicable
Skin: May be harmful if in contact with skin
Eye: Causes mild eye irriation

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable
Hazards from products	If incinerated, product will release the following toxic fumes: Oxides of Carbon, Potassium, Silicon and Sodium.
Suitable Extinguishing media	CO_2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Precautions for firefighters and special protective	As in any fire, wear self-contained breathing apparatus pressure-demand (NIOSH approved or equivalent), and full protective gear to prevent contact with skin and eyes.

clothing	
HAZCHEM CODE	**None Allocated**

Section 6. Accidental Release Measures

Wear protective gear as detailed in Section 8. Evacuate all unnecessary personnel. Ensure adequate ventilation Material can create slippery conditions.

Do not allow to enter drains and water courses.

Absorb with liquid-binding material (ie. sand, diatomite, acid binders, universal binders, sawdust). Use neutralizing agent.
Dispose contaminated material as waste according to section 13.

Section 7. Handling and Storage

Precautions for Handling:

- Read label before use.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Avoid inhalation of dusts, vapors / spray and contact with eyes, skin and clothing.
- Do not use in areas without adequate ventilation.
- Avoid prolonged exposure.
- Do not empty into drains.
- Handle and open container with care.
- Use care in handling/storage.

Precautions for Storage:

- DO NOT STORE OR TRANSPORT IN ALUMINUM CONTAINERS.
- No air sparging; NH4+ converts to NH3 if pH > 8.
- Store in original containers only.
- Cold storage okay with circulation.
- Keep containers tightly closed when not in use.
- Store in a cool, dry, well-ventilated area, preferably in a locked storage area away from children, feed, food products, and seed.
- Do not contaminate water, food or feed by storage or disposal.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

Substance	**TWA ppm**	**TWA mg/m³**	**STEL ppm**	**STEL mg/m³**
Sodium hydroxide [1310-73-2]		Ceiling 2		
Potassium hydroxide [1310-58-3]		Ceiling 2		

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
Provide adequate general and local exhaust ventilation. Observe Occupational Exposure Limits and minimize the risk of inhalation of vapors and spray mists.
Provide eyewash station and safety shower.

Personal Protection Equipment

Eyes	Goggles or shielded safety glasses are recommended.
Skin	Chemical resistant clothing is recommended. Routinely wash work clothing and protective equipment to remove contaminants. The use of chemical-resistant gloves is recommended when handling undiluted product. Be aware that the liquid may penetrate the gloves. Frequent change is advisable.
Respiratory	In case of inadequate ventilation or risk of inhalation of dusts or vapors, use suitable respiratory equipment such as MSHA/NIOSH TC-21C or NIOSH approved respirator with N, R, P or HE filter. Wear respiratory protection during operations where spraying or misting occurs. If respirators are used, a program should be in place to assure compliance with 29 CFR 1910.134, the OSHA Respiratory Protection standard. Wear air supplied respiratory protection if exposure concentrations are unknown.

Section 9 Physical and Chemical Properties

Appearance	Liquid
Colour	Black
Odour	Odourless
Odour Threshold	Not available
pH	11-12.5
Boiling Point	Not available
Melting Point	Not available
Freezing Point	Not available
Flash Point	100^0C
Flammability	Not available
Upper and Lower Explosive Limits	0.0 Vol % 0.0 Vol %
Vapour Pressure	23 hPa (17 mm Hg)
Density	1.100 g/cm³
Specific Gravity	Not available
Water Solubility	Soluble
Partition Coefficient:	Not available
Auto-ignition Temperature	Product is not self-igniting.
Decomposition Temperature	Not available
Kinematic Viscosity	Not available
Particle Characteristics	Not available
Organic solvents: **Water:** **Other information**	0.0% 68.3% No further information

Section 10. Stability and Reactivity

Stability of Substance	This product is stable under normal conditions.
Possibility of hazardous reactions	No dangerous reactions known.
Conditions to Avoid	No further relevant information available.
Incompatible Materials	None known.
Hazardous Decomposition Products	Oxides of Carbon, Potassium, Silicon and Sodium.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Harmful if swallowed.
Dermal	May be harmful if in contact with skin.
Inhalation	Not applicable.
Eye	Causes mild eye irritation.
Skin	Not applicable.

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.

Individual component information:
Acute Toxicity:

Chemical Name	Oral – LD50	Dermal – LD50	Inhalation – LC50
Sodium hydroxide (1310-73-2)	-	1350mg/kg (Rabbit)	-
Potassium hydroxide (1310-58-3)	273mg/kg (rat)	-	-

Section 12. Ecotoxicological Information

This product is not hazardous to the environment.

Product:	
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:
Small amounts may be diluted with plenty of water and washed away. Dispose of bigger amounts in accordance with Local Authority requirements.

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 EPA Hazardous Substances (Classification) Notice 2017

EPA Approval Code: Fertilisers (subsidiary) – HSR002571

HSNO Classification: 6.1D(oral), 6.1E(dermal), 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	1000L (6.1D)
Secondary Containment	1000L (6.1D)
Restriction of Use	Only use for the intended purpose.

Section 16 Other Information

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. 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

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

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