SAFETY DATA SHEET

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

Section 1. Identification of the material and the supplier

Product:	**Waikaitu NZBioAmino 9% Nitrogen**
Product Use:	Organic Seaweed Extract
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:	24 September 2019

Section 2. Hazards Identification

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

Section 3. Composition / Information on Hazardous Ingredients

No hazardous product as specified in Directive 67/548/EEC.
Preparation: Liquid hydrolysate of amino acid.
Description: Aqueous solution of amino acid hydrolysate. Amino acids and peptides obtained by enzymatic hydrolysis. Mixed with Seaweed extract.

Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Rinse cautiously with water for 15 minutes. 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	Do not induce vomiting. 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:

Swallowing:	After swallowing: Nausea and vomiting. After uptake of large quantities: Diarrhoea.
Inhalation:	After inhalation of aerosols: Slight irritations of the mucous membranes and coughing.
Eye Contact:	Slight irritants
Skin Contact:	Slight irritants

Section 5. Fire Fighting Measures

Hazard Type	Non Flammable
Hazards from combustion products	The material itself is harmless and hardly inflammable. Ambient fire may liberate hazardous vapours. If larger quantities of the product are on fire, the formation of nitrous gases and ammonia is possible.
Suitable Extinguishing media	Water, carbon dioxide, dry extinguishing media, foam.
Precautions for firefighters and special protective clothing	Do not stay in dangerous zone without suitable chemical protecting clothes and self-contained breathing apparatus. Contain escaping vapours with water.
HAZCHEM CODE	**None Allocated**

Section 6. Accidental Release Measures

Wear protective gear as detailed in Section 8. Evacuate all unnecessary personnel. Avoid product contact and formation of vapours/aerosols. Do not inhale vapours/aerosols.

Do not allow to enter drains and water courses.

Take up with absorption media and place in container for disposal according to local regulations (see section 13).

Section 7. Handling and Storage

Precautions for Handling:

- Wear protective clothing.
- Avoid product contact and formation of vapours/aerosols.
- Do not inhale vapours/aerosols. In event of vapours/aerosols wear respiratory protection, safety glasses and gloves.
- Remove soiled and soaked clothes and wash hands and face after work.

Precautions for Storage:

- Protect the product from impurity or drying up.
- Temperature in stockrooms not below -5°C and above +40°C.
- Do not store in metal containers (corrosion risk).
- Keep containers tightly closed.
- Do not store together with food and luxury food, beverage and animal feed.
- It is recommended to design stockrooms so that the product is well-protected from weather factors, solar radiation, heat up, dry up and impurities.

Section 8 Exposure Controls / Personal Protection

WORKPLACE EXPOSURE STANDARDS (provided for guidance only)

	TWA		**STEL**	
Substance	**ppm**	**mg/m³**	**ppm**	**mg/m³**

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 is available to reduce exposure.

Personal Protection Equipment

Eyes	Wear goggles.
Hands	Use rubber or plastic gloves.
Skin	Closed working clothes.
Respiratory	Not required. Respiratory protection necessary at vapours / aerosol and wet fog formation.
Hygiene	Do not eat and drink at work. Remove immediately soiled and soaked clothes. Wash hands and face after work.

Section 9 Physical and Chemical Properties

Appearance	Aqueous solution
Colour	Brown
Odour	Product specific
Odour Threshold	Not available
pH (original state)	Approx. 4.5
pH at 16 g/l H2O and 20°C:	Approx. 4.5
Change in physical state	> 100°C evaporation of water
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
Density (@20^{0}C)	1.25 g/cm^3
Water Solubility(@20^{0}C)	Fully water soluble in each ratio
Partition Coefficient:	Not available
Auto-ignition Temperature	The product is not spontaneously inflammable
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	Under normal conditions of storage and use, hazardous

reactions	reactions will not occur.
Conditions to Avoid	Direct solar radiation, heat up and dry up. Temperatures above + 40° C.
Incompatible Materials	Strong alkaline materials, strong acid materials and strong oxidizer.
Hazardous Decomposition Products	No decomposition if correctly used. Reacts with alkalis setting ammonia free. Thermic Decomposition - Nitrous gases and ammonia.

Section 11 Toxicological Information

Acute Effects:

Swallowed	Not applicable however after swallowing: Nausea and vomiting. After uptake of large quantities: Diarrhoea. Oral for this product = LD50 (oral): =>5000mg/kg = Non hazardous
Dermal	Not applicable.
Inhalation	After inhalation of aerosols: Slight irritations of the mucous membranes and coughing.
Eye	Not applicable.
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.

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	Depending on the concentration, phosphorus and/or nitrogen compounds may contribute to the eutrophication of drinking- water supplies.

Section 13. Disposal Considerations

Disposal Method:
Dispose of 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

This product is NOT classified as a Dangerous Good for transport under IATA or IMDG
This product is NOT classified as a Dangerous Good for transport (Road/Rail)

Section 15 Regulatory Information

This substance is NOT classified 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.
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

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