



MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER	
Product Name	AminoPro-N liquid
Product Code	AminoPro-N liquid
Product Type	Enzymatically Hydrolysed Plant Protein Organic Protein Nitrogen Fertiliser
Other Names	Amino N. Protein N. Organic Nitrogen. Amino Acid. Protein. Natural Nitrogen. Hortigro AminoPro-N liquid, Landco Fertiliser AminoPro-N liquid
Product Use	Fertiliser for Agriculture, Horticulture, Viticulture, Gardening, Glass Houses, Fertigation
Importer Name	Hortigro Ltd
Address	164 Manukau Road, Pukekohe 2120
Contact Numbers/info Office/Emergency	09 237 1777 or 0274710625 or tony@hortigro.com . For an emergency please dial 111
Origin / Supply	China. Processed from Powder to liquid by Hortigro Ltd in NZ
Presentation	AminoPro-N liquid presents as a dark brown to black syrup like liquid concentrate with a distinguishing protein aroma

2. HAZARDS IDENTIFICATION
Non-Hazardous product/substance: Non-dangerous

3. COMPOSITION / INFORMATION ON PRODUCT INGREDIENTS (Specification and Analysis)		
Aqueous solution of amino acid hydrolysate	100%	CAS No. 9010-10-0 and other

4. FIRST AID MEASURES	
AminoPro-N Liquid is not recommended for direct human consumption and generally will not cause harm. The below precautions reflect worst case scenario's.	
Inhalation	Fumes from AminoPro-N liquid should cause no harm, however if a person is not breathing, then provide artificial respiration; if breathing is difficult provide oxygen. If symptoms persist seek medical attention or dial 111.
Ingestion	If product has been swallowed and caused unconsciousness, do not give anything by mouth, always seek medical attention or dial 111 if symptoms persist.
Skin	Remove and wash contaminated clothing, wash affected skin areas with soap and water, seek medical attention if symptoms persist.
Eyes	If aggravation is caused by product splash, identify any contact lenses, remove and rinse lens, then eyes with running water for at least 15 minutes keeping eyes open. If symptoms persist seek medical attention.

5. FIRE FIGHTING MEASURES	
Suitable Extinguishing Media	Use extinguishing media suitable for the surrounding fire ie chemical powder, water spray, fog, foam however DO NOT use water jet.
Hazardous Combustion Products	Oxides of carbon, nitrogen and sulphur
Firefighting Equipment	Wear approved self-contained breathing apparatus and full protective clothing
Unusual Fire or Explosion Hazards	May possibly be combustible at high temperature. Slightly flammable in the presence of heat



Hazchem Code	Not Applicable
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6. ACCIDENTAL RELEASE MEASURES	
Spills and Disposal	Wash away uncontaminated residue with water. Diluting product with water will reduce any environmental harm from the concentrate.
Environment	Aim to limit product being directed into drains and waterways.

7. HANDLING AND STORAGE	
Handling	Comply with safe work practices to avoid eye and skin contact or inhalation. Ensure quality personal hygiene and wash hands before handling food or eating. Be careful and safety conscious when moving product to protect against spillage loss or contamination. Contaminated product should always be disposed off especially in instances where product may be sold or used for certified organic (or similar) use.
Storage	Keep product away from heat or sources of ignition. Ground all equipment containing material. Keep product away from incompatibilities such as oxidising agents. Store AminoPro-N liquid in original packing and where needed offer further protection from other contamination. Store in a cool dry area with good ventilation.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION	
Exposure Standards	Nuisance dust. 8hr TWA = 10mg/m ³
Engineering Controls	Local exhaust ventilation is recommended during processing or use.
Respiratory protection	Use an approved mask when spraying. Refer NZ standards
Eye Protection	Wear safety glasses when using / preparing
Skin Protection	General purpose gloves and protective clothing
Hygienic Practices	Food and Beverages should not be stored or consumed where this material is in use. Ensure adequate water flow for eye flushing if available and showers for body washing. Keep hands washed after contact / use.

9. PHYSICAL AND CHEMICAL PROPERTIES	
Appearance	Brown to black syrup like concentrate
Odour	Unpleasant Protein Odour when dealing with product
Solubility in Water	Soluble
Freezing / Melting Point	Information not available to confirm freezing or melting points.
Vapour Pressure	Not Applicable
pH	~5-6
Flash Point	Not Applicable
Flammable Limit - lower	Not Applicable
Flammable Limit - upper	>176°C

10. STABILITY AND REACTIVITY	
Chemical Stability	Stable
Incompatible Materials	Oxidising Agents. Alkaline chemicals (potential for a release of ammonia)
Hazardous Decomposition Products	No Information Available
Hazardous Polymerization	Will not occur



Conditions to Avoid	Keep away from incompatible agents such as oxidising agents. Keep away from sources of ignition.

11. TOXICOLOGICAL INFORMATION	
Toxicity	Oral LD ₅₀ (rat) >7500 mg/kg Inhalation LC ₅₀ (mouse) > 4500 mg/kg
Routes of Exposure	Inhalation, Ingestion, Eye and Skin
Health effects from Likely routes of exposure	Inhalation: May cause cough and mild respiratory irritation Ingestion: Ingestion of large quantities may cause nausea / abdominal discomfort Eye: May cause mild irritation Skin: May cause mild irritation
Effects of overexposure	Prolonged exposure may affect respiration, spleen blood (including changes in white blood cell count)
Existing Conditions Aggravated by Exposure	No information available
Carcinogenicity	No information available

12. ECOLOGICAL INFORMATION	
Ecotoxicity	Unavailable (Biodegradable. Product and degradation products are not toxic)
Mobility	Unavailable (Soluble)

13. DISPOSAL CONSIDERATIONS	
Disposal methods and containers	Dispose per applicable local and government regulations
Special precautions for landfill or incineration	Consult Local Authority for waste management information

14. TRANSPORT INFORMATION	
Dangerous Goods	Not Classified as dangerous goods under the LAND TRANSPORT RULE 4500111 2005 5.3.(i) (b) for DANGEROUS GOODS
Un Number	Not Applicable
Proper Shipping Name	Not Applicable
Dangerous Goods Class	Not Applicable
Hazchem Code	Not Applicable
Packing Group	Not Applicable
Special Precautions	Not Applicable

15. REGULATORY INFORMATION	
AminoPro-N Liquid is non-hazardous per the HSNO (minimum degrees of hazard) Regulations 2001	

16. OTHER INFORMATION	
Last revision of MSDS	January 2017
Prepared by	Keith Jackson - Hortigro Ltd