

# MATERIAL SAFETY DATA SHEET

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER	
<b>Product Name</b>	AminoPro-N powder
<b>Product Code</b>	AminoPro-N powder
<b>Product Type</b>	Enzymatically Hydrolysed Plant Protein Powder   Organic Protein Nitrogen Fertiliser
<b>Other Names</b>	Amino N. Protein N. Organic Nitrogen. Amino Acid Powder. Protein Powder. Natural Nitrogen. Hortigro N
<b>Product Use</b>	Fertiliser for Agriculture, Horticulture, Viticulture, Gardening, Glass Houses, Fertigation
<b>Importer Name</b>	Hortigro Ltd
<b>Address</b>	164 Manukau Road, Pukekohe 2120
<b>Contact Numbers/info Office/Emergency</b>	09 237 1777 or 0274710625 or <a href="mailto:tony@hortigro.com">tony@hortigro.com</a> . Dial 111 in an emergency
<b>Origin / Supply</b>	China
<b>Presentation</b>	AminoPro-N generally presents as a fine off-white to soft-yellow colour with a distinguishing protein aroma

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

3. COMPOSITION / INFORMATION ON PRODUCT INGREDIENTS (Specification and Analysis)			
<b>Amino Acid Fertiliser</b>	95%	<b>CAS No. 9010-10-10</b>	
<b>Remainder Inert Plant Material</b>			

4. FIRST AID MEASURES	
AminoPro-N powder is not recommended for direct human consumption and generally will not cause harm. If swallowed AminoPro-N will have an unpleasant protein flavour when in the mouth. The below precautions reflect worst case scenario's.	
<b>Inhalation</b>	If dust or product is inhaled move to fresh air; 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
<b>Ingestion</b>	If product has been ingested and caused unconsciousness, do not give anything by mouth, always seek medical attention or dial 111 if symptoms persist.
<b>Skin</b>	Remove and wash contaminated clothing to rid dust, wash affected skin areas with soap and water, seek medical attention if symptoms persist.
<b>Eyes</b>	If aggravation is caused by product dust, 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	
<b>Suitable Extinguishing Media</b>	Use extinguishing media suitable for the surrounding fire ie chemical powder, water spray, fog, foam however DO NOT use water jet.
<b>Hazardous Combustion Products</b>	Oxides of carbon, nitrogen and sulphur
<b>Firefighting Equipment</b>	Wear approved self-contained breathing apparatus and full protective clothing
<b>Unusual Fire or Explosion Hazards</b>	May possibly be combustible at high temperature. Slightly flammable in the presence of heat
<b>Hazchem Code</b>	Not Applicable

6. ACCIDENTAL RELEASE MEASURES	
<b>Spills and Disposal</b>	Sweep into a dry container for salvage or disposal. Wash away uncontaminated residue with water
<b>Environment</b>	Aim to limit product being directed into drains and waterways.

<b>7. HANDLING AND STORAGE</b>	
<b>Handling</b>	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.
<b>Storage</b>	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 powder in original packing and where needed offer further protection from damp conditions or other contamination. Store in a cool dry area with good ventilation and away from exposure to adverse weather. Ensure AminoPro-N powder does not lay in or on damp or wet surfaces.

<b>8. EXPOSURE CONTROLS / PERSONAL PROTECTION</b>	
<b>Exposure Standards</b>	Nuisance dust. 8hr TWA = 10mg/m <sup>3</sup>
<b>Engineering Controls</b>	Local exhaust ventilation is recommended when dust can be released in excess of established airborne limits.
<b>Respiratory protection</b>	Use an approved mask for fine particle dust. Refer NZ standards
<b>Eye Protection</b>	Wear safety (full covering) glasses for dusty conditions
<b>Skin Protection</b>	General purpose gloves and protective clothing
<b>Hygienic Practices</b>	Food and Beverages should not be stored or consumed where this material is in use. Ensure adequate water flow for eye flushing is available and showers for body washing. Keep hands washed after contact / use.

<b>9. PHYSICAL AND CHEMICAL PROPERTIES</b>	
<b>Appearance</b>	Off-white to pale-yellow fine powder
<b>Odour</b>	Unpleasant Protein Odour when exposed / removed from bag
<b>Solubility in Water</b>	Soluble
<b>Freezing / Melting Point</b>	Information not available to confirm freezing or melting points.
<b>Vapour Pressure</b>	Not Applicable
<b>pH</b>	~5-6
<b>Flash Point</b>	Not Applicable
<b>Flammable Limit - lower</b>	Not Applicable
<b>Flammable Limit - upper</b>	>176°C

<b>10. STABILITY AND REACTIVITY</b>	
<b>Chemical Stability</b>	Stable
<b>Incompatible Materials</b>	Oxidising Agents. Alkaline chemicals (potential for a release of ammonia)
<b>Hazardous Decomposition Products</b>	No Information Available
<b>Hazardous Polymerization</b>	Will not occur
<b>Conditions to Avoid</b>	Keep away from incompatible agents such as oxidising agents. Keep away from sources of ignition. Do not

<b>11. TOXICOLOGICAL INFORMATION</b>	
<b>Toxicity</b>	Oral LD <sub>50</sub> (rat) >7500 mg/kg Inhalation LC <sub>50</sub> (mouse) > 4500 mg/kg
<b>Routes of Exposure</b>	Inhalation, Ingestion, Eye and Skin
<b>Health effects from Likely routes of exposure</b>	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
<b>Effects of overexposure</b>	Prolonged exposure may affect respiration, spleen blood (including changes in white blood cell count)

<b>Existing Conditions Aggravated by Exposure</b>	No information available
<b>Carcinogenicity</b>	No information available

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

<b>13. DISPOSAL CONSIDERATIONS</b>	
<b>Disposal methods and containers</b>	Dispose according to applicable local and government regulations
<b>Special precautions for landfill or incineration</b>	Consult Local Authority for waste management information

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

<b>15. REGULATORY INFORMATION</b>	
AminoPro-N powder is non-hazardous according to the HSNO (minimum degrees of hazard) Regulations 2001	

<b>16. OTHER INFORMATION</b>	
<b>Last revision of MSDS</b>	April 2017
<b>Prepared by</b>	Keith Jackson (General Manager) Hortigro Ltd