MATERIAL SAFETY DATA SHEET

PRODUCT: HYDROPONIC NUTRIENT – 2 PARTS

Date of Issue: 30 SEPT 2025 **Valid until:** 29 SEPT 2030 **GHS** Format

1. IDENTIFICATION OF MATERIAL & SUPPLIER

Product (material) Name: Manutec Hydroponic Nutrient Soluble – 2 Part
Other names: None
Manufacturer's code: MTO6009 (600G), MTO5009 (500G), MBP1922 (10KG)
Recommended use: Used as a soluble fertiliser for specific nutrient needs of all hydroponically growing plants

Manufacturer/Supplier Information:

Name: MANUTEC PTY LTD
Address: 30 Jonal drive, Cavan, South Australia 5094
Telephone No:+61-8-8260 2277 **Fax**:+61-8-8260 2399
Email: manutec@manutec.com.au

Emergency contact only: Poisons Information Centre (Australia) 131126

2. HAZARDS IDENTIFICATION

Poisons Schedule: None Scheduled

Hazard Classification:

Part 1 – Fertiliser mix : NOT hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)

Part 2 – Calcium Nitrate: HAZARDOUS according to the Model WHS Regulations

Hazard Categories:
Part 1 - None specified

Part 2 - Acute Toxicity (Oral) - Category 4
Serious Eye Damage/Irritation - Category 1

Pictograms:
Part 1 - None specified

Part 2 -

Signal Word: Danger

Hazard Statements:
Part 1 – None specified

Part 2 - H302 Harmful if swallowed.
H318 Causes serious eye damage.

Precautionary Statements:
Part 1 – None specified
Part 2

Prevention	P264	Wash exposed skin thoroughly after handling.
	P270	Do not eat, drink or smoke when using this product.
	P280	Wear eye protection/face protection.
Response	P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.	
	P330 Rinse mouth.	
	P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.	
	P310 Immediately call a POISON CENTER or doctor/physician.	
Disposal	P501 Dispose of contents/container in accordance with local / regional / national /international regulations.	

National Transport Commission (Australia)
Dangerous Goods Classification

NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code). Special provision-208 applies. Refer to Section -14 for details.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Entity	CAS Number	Proportion
Part 1 - Fertiliser		
Proprietary formulation of various non-hazardous ingredients in soluble form (Major Ingredients are, Potassium Fertiliser (CAS NO 7757-79-1) Magnesium Sulphate (CAS No 10034-99-8 and Mono Ammonium Phosphate (CAS NO 7722-76-1)		<=100%
Part 2 – Calcium Nitrate Decahydrate	CAS No 15245-12-2	<=100%

4a. FIRST AID MEASURES – Part 1 – Fertiliser mix

If poisoning occurs, please contact immediately Poisons Information Centre (Australia) on 131126

Ingestion: Rinse mouth with water. If swallowed, do not induce vomiting. Give a glass of water to drink, but never give anything by mouth to unconscious person. If vomiting occurs give additional water. Seek medical advice immediately.

Eye:	Flush with flowing water for 10-15 minutes. If irritation persists, seek immediate medical advice.
Skin:	Remove contaminated clothing. Wash affected part with soap and clean water. Any symptoms such as swelling, redness, blister or irritation occurs, seek immediate medical attention.
Inhaled:	Remove victim to fresh air. Remove contaminated clothing and make victim comfortable position. Seek medical help if victim still uncomfortable and develop any symptoms.
Aid Facilities:	Poisons Information Centers in each State capital city may provide additional assistance (Ph. 131126).
Advice to doctor:	No special advice, treat symptomatically.

4b. FIRST AID MEASURES – Part 2 – Calcium Nitrate

Eye Contact
Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.
Skin Contact
Remove contaminated clothing. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if symptoms occur.
Inhalation
Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and Get medical attention
Ingestion
If swallowed, immediately rinse mouth with water and then drink plenty of water. DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Get immediate medical attention.

5a. FIRE FIGHTING MEASURES – PART 1 – Fertiliser mix

Hazchem code: Not applicable
Extinguishing media:
Material is non-combustible, however if caught in fire use Water spray/fog, foam, dry agent (carbon dioxide/dry chemical powder)
Special protective equipment for firefighters:
On decomposition, may emit toxic fumes, so fire fighters to wear appropriate clothing and self-contained breathing apparatus.

5b. FIRE FIGHTING MEASURES – PART 2 – Calcium Nitrate Decahydrate

General Measures
Clear fire area of all non-emergency personnel. Stay upwind. Keep out of low areas. Eliminate ignition sources. Move fire exposed containers from fire area if it can be done without risk. Do NOT move cargo if cargo has been exposed to heat.
Flammability Conditions Not combustible, but substance can support combustion of other materials on fire.

Extinguishing Media Use any means suitable for extinguishing surrounding fire. Water spray may be used to keep fire exposed containers cool.
Fire and Explosion Hazard Can cause explosions in contact with combustible dusts or vapors; occasionally explosive by shock or friction. Sensitive to mechanical impact. Exposure to heat may result in build-up of dangerous pressures.
Hazardous Products of Combustion No Data Available
Special Fire Fighting Instructions
Do NOT allow firefighting water to reach waterways, drains or sewers. Store firefighting water for treatment and later disposal.
Personal Protective Equipment
Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective firefighting clothing (includes firefighting helmet, coat, trousers, boots and gloves) or chemical splash suit.
Flash Point No Data Available
Lower Explosion Limit No Data Available
Upper Explosion Limit No Data Available
Auto Ignition Temperature No Data Available
Hazchem Code: no data available

6. ACCIDENTAL RELEASE MEASURES – FOR BOTH PART 1 & Part 2

Small spills: Ensure to wear appropriate protective gear (such as gloves/goggles) as appropriate and sweep to collect in to a rag or paper towel and dispose as general waste. Avoid contact with eye/skin
Large spills: Ensure to wear appropriate protective gear and sweep and collect in to properly labelled containers. Avoid material entering in to drainage or waterways. Advice or contact local council or environmental authority as appropriate.

7. HANDLING AND STORAGE - FOR BOTH PART 1 & Part 2

- Avoid Skin, eye contact and inhalation of dust.
- Store in a dry, cool and ventilated place away from Children, pets and exposure to direct sunlight. Also store away from any incompatible materials described in section 10 of this safety data sheet.
- When not in use and after use, ensure to keep the container/bag sealed securely.
- If any spillage, follow appropriate action as described in section 6 of this data sheet.
  Store in original packaging with labels as approved by manufacturer

8. EXPOSURE CONTROLS/PERSONAL PROTECTION- FOR BOTH PART 1 & PART 2

Engineering measures:
Proper Ventilation in place, particularly while handling larger volumes in factory settings and use appropriate protective cloth.
Control of exposition limit:
Respiratory protection: Keep ventilated and use mask during handling large volumes
Hand protection: Rubber or plastic gloves
Eye protection: Safety glasses
Skin protection: Use adequate clothing and overalls

Personal Protection in Manufacturing/Packing area:
Wear overalls, safety glasses and impermeable gloves. Avoid generating dust. If dust exists wear appropriate dust mask meeting requirements of AS/NZS 1715 Standards. Always wash hands after handling and before eating, smoking or drinking. Wash contaminated clothing before storing or reuse

Hygienic and personal protection practices while handling the product
Wear safety glasses and impermeable gloves and dust mask if required.
Keep the material/product away from food and drink, animal feed.
When using, do not eat, drink or smoke
Wash hands or affected area thoroughly prior to eating, drinking or smoking
Avoid contact with skin, eye and inhalation of any dust from the product.

9a. PHYSICAL AND CHEMICAL PROPERTIES – Part 1- Fertiliser

Form:	Crystalline powder
Colour:	Off white
Odour:	None
Melting Point:	Not applicable
Boiling Point:	Not applicable
Vapor Press kPa 025C:	Nil
Specific Gravity:	Not determined
Flashpoint (C):	Non flammable
Flammability Limits:	Non flammable
Solubility in water:	Completely soluble in water

9b. PHYSICAL & CHEMICAL PROPERTIES – Part 2- Calcium Nitrate

Form:	Crystalline/granular
Colour:	White
Odour:	None
Melting Point:	45oC
Boiling Point:	Not applicable
Vapour Press kPa 025C:	Nil
Specific Gravity:	Not determined
Flashpoint (C):	Non flammable
Flammability Limits:	Non flammable
Solubility in water:	Completely soluble in water

10. STABILITY & REACTIVITY- FOR BOTH PART 1 & Part 2

General Information	Product is a non-flammable solid.
Chemical Stability	Product is stable under normal conditions of use, storage and temperature.
Conditions to Avoid	Avoid excessive heat, generating dust, direct sunlight, moisture and high temperatures.
Materials to Avoid	Incompatible with strong Oxidising agents, bases, mineral acids and combustibles

Hazardous Decomposition Products
Main combustion gas: sulfur oxides (SOx), metal oxides.

Hazardous Polymerisation
Hazardous Polymerisation has not been reported.

11a. TOXICOLOGICAL INFORMATION – Part 1 – Fertiliser mix

In general when the product is used and handled safely and as per directions on the label and per safety data sheet instructions, no adverse effects are expected. However in case of mishandling or overexposure to the product, may result in symptoms of acute and Chronic effects.

Information on Toxicity: No published data or information available, however materials used in this product are considered non- hazardous.

ACUTE EFFECTS

Ingestion/Swallowed:	May cause gastric irritation and result in nausea & vomiting, however ingestion of large amounts may be harmful and dangerous.
Eye:	Irritant on contact
Skin:	Prolonged exposure may cause irritation and dry skin, particularly to sensitive skins
Inhaled:	Non-hazardous, but dusts may be irritant to the respiratory track or mucous membrane.

Chronic Toxicity:

Mutagenicity:	No data/information available, but material considered non hazardous
Carcinogenicity	This material considered non hazardous
Specific Organ Toxicity	No information available but material considered nonhazardous.

11b. TOXICOLOGICAL INFORMATION – Part 2 – Calcium Nitrate

Eye Irritant	Causes irritation, redness, and pain.
Ingestion	Causes irritation to the gastrointestinal tract. Symptoms may include nausea, vomiting and diarrhea.
Inhalation	Causes irritation to the respiratory tract. Symptoms may include coughing, shortness of breath.
Skin Irritant	Causes irritation to skin. Symptoms include redness, itching, and pain.
Acute Toxicity (oral) Ingestion:	LD50, Rats:300-2000mg/kg bw (ECHA)
Carcinogen Category	None

12. ECOLOGICAL INFORMATION - FOR BOTH PART 1 & Part 2

Eco toxicity	No data available
Mobility	Completely soluble in water.
Environmental Fate	Do NOT allow excessive product to reach waterways, drains and sewers**.**
Bioaccumulation Potential	No information available on bioaccumulation for this product.
Environmental Impact	No Data Available

13. DISPOSABLE CONSIDERATIONS - FOR BOTH PART 1 & Part 2

General Information Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility.

14. TRANSPORT INFORMATION - FOR PART 1

National Transport Commission (Australia)
Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)
Dangerous Goods Classification
NOT Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Marine Transport
Not classified as dangerous according to the criteria of International Marine Dangerous Goods (IMDG) for transport by sea.

Air Transport
Not classified as dangerous according to the criteria of International Air Transport Association (IATA) Dangerous Goods regulation for transport by air.

14. TRANSPORT INFORMATION - FOR BOTH PART 2 – Calcium Nitrate

Land Transport (Australia)- ADG CODE

Proper Shipping Name	Nitric acid, Ammonium Calcium Salt
Class	No Data Available
Subsidiary Risk(s)	No Data Available
EPG	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Special Provision	208
Comments:	NON-DANGEROUS GOODS :Not regulated for LAND transport

Sea Transport - IMDG CODE

Proper Shipping Name	Nitric acid, Ammonium Calcium Salt
Class	No Data Available

Subsidiary Risk(s)	No Data Available
EPG	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Marine pollutant	NO
Special Provision	208
Comments:	NON-DANGEROUS GOODS :Not regulated for SEA transport

AIR Transport - IATA DGR CODE

Proper Shipping Name	Nitric acid, Ammonium Calcium Salt
Class	No Data Available
Subsidiary Risk(s)	No Data Available
EPG	No Data Available
UN Number	No Data Available
Hazchem	No Data Available
Pack Group	No Data Available
Marine pollutant	NO
Special Provision	208
Comments:	NON-DANGEROUS GOODS :Not regulated for AIR transport

15. REGULATORY INFORMATION

Constituents or materials used in this product are covered by Australian Inventory of Chemical Substances (AICS)

Poisons Schedule (Aust) Not scheduled

16. OTHER INFORMATION

The MSDS is a Hazard Communication tool and should be used to assist in the Risk Assessment. Many factors determine whether the reported Hazards are Risks in the workplace or other settings. Risks may be determined by reference to Exposures Scenarios. Scale of use, frequency of use and current or available engineering controls must be considered.

STATEMENT OF DISCLAIM:

This Material Safety Data Sheet has been developed according to WHS Code of Practice Preparation of Safety Data Sheets for Hazardous Chemicals Guidelines and written in accordance with GHS format. All information is as accurate and up-to-date as possible. Since Manutec Pty Ltd cannot anticipate or control the conditions under which this information may be used, each user should review the information in the specific context of the intended application. Manutec Pty Ltd will not be responsible for damages of any nature resulting from use of or reliance upon this information.
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