

**1. Identification of Substance & Company**

<b>Product</b>	
<b>Product name</b>	Polygon NPK + Micros
<b>Other names</b>	no other names
<b>Product codes</b>	NA
<b>HSNO approval</b>	HSR002571
<b>Approval description</b>	Fertilisers (Subsidiary Hazard) Group Standard 2017
<b>UN number</b>	2071
<b>DG class</b>	9
<b>Proper Shipping Name</b>	AMMONIUM NITRATE BASED FERTILISER
<b>Packaging group</b>	III
<b>Hazchem code</b>	1Z
<b>Uses</b>	Fertiliser
<b>Company Details</b>	
<b>Company</b>	<b>Primehort Distributors Ltd</b>
<b>Address</b>	PO Box 28 Maungaturoto 0547 New Zealand
<b>Telephone</b>	0800 127 746

**Emergency Telephone Number: 0800 764 766**

**2. Hazard Identification**

**Approval in New Zealand**

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO, Approval HSR002571, Fertilisers (Subsidiary Hazard) Group Standard 2017): The substance has been classified as hazardous according to the criteria in the Hazardous substances (Minimum Degrees of Hazard) Notice 2017.

<b>Classes</b>	<b>Hazard Statements</b>
6.3B	H316 - Causes mild skin irritation.
6.4A	H319 - Causes serious eye irritation.
6.5B	H317 - May cause an allergic skin reaction.
9.1C	H412 - Harmful to aquatic life with long lasting effects.

**SYMBOLS**

**WARNING**



**Other Classification**

There are no other classifications that are known to apply.

**Precautionary Statements**

- P103 - Read label before use.
- P261 - Avoid breathing dust.
- P264 - Wash hands thoroughly after handling.
- P273 - Avoid release to the environment.
- P272 - Contaminated work clothing should not be allowed out of the workplace.
- P280 - Wear protective gloves/eye protection.
- 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.
- P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
- P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
- P363 - Wash contaminated clothing before reuse.
- P501 - Dispose of contents/container in accordance with local/regional/national/international regulation.

### 3. Composition / Information on Ingredients

Component	CAS/ Identification	Conc (%)
Ammonium nitrate	6484-52-2	35-45%
Potassium sulphate	7778-80-5	20-30%
Polymer coating	proprietary	4-17%
Monoammonium phosphate	7722-76-1	5-10%
Magnesium Sulphate	7487-88-9	5-10%
Non hazardous ingredients	mixture	5-10%
Ammonium phosphate dibasic	7783-28-0	<4%
Copper sulphate	7758-98-7	<0.4%
Zinc sulphate	7733-02-0	<0.3%

This is a commercial product whose exact ratio of components may vary. Trace quantities of impurities are also likely.

### 4. First Aid

#### General Information

If medical advice is needed, have product container or label at hand. You should call the National Poisons Centre if you feel that you may have been harmed or irritated by this product. The number is 0800 764 766 (0800 POISON) (24 hr emergency service).

**Recommended first aid facilities** Ready access to running water is required. Accessible eyewash is required.

#### Exposure

**Swallowed** IF SWALLOWED: Call a POISON CENTRE or doctor/physician if you feel unwell. Rinse mouth. Do NOT induce vomiting. Give a glass of water to drink.

**Eye contact** IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**Skin contact** IF ON SKIN: Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/ attention. Take off contaminated clothing and wash before re-use.

**Inhaled** Generally, inhalation of dusts is unlikely to result in adverse health effects. If coughing, dizziness or shortness of breath is experienced, remove the patient to fresh air immediately. If patient is unconscious, place in the recovery position (on the side) for transport and contact a doctor.

#### Advice to Doctor

Treat symptomatically

### 5. Firefighting Measures

**Fire and explosion hazards:** This product is not classed as flammable or as an oxidiser. It does contain ammonium nitrate which is considered an oxidiser. There is an explosion risk in case of fire. Carbon dioxide, extinguishing powder, foam.

**Suitable extinguishing substances:**

**Unsuitable extinguishing substances:** Water jets

**Products of combustion:** Ammonia, nitrogen (NO<sub>x</sub>), potassium oxides, sulphur oxides (SO<sub>x</sub>). Carbon dioxide, and if combustion is incomplete, carbon monoxide and smoke. Water. May form toxic mixtures in air and may accumulate in sumps, pits and other low-lying spaces, forming potentially explosive mixtures.

**Protective equipment:** No special measures are required.

**Hazchem code:** 1Z

### 6. Accidental Release Measures

**Containment** If greater than 1000kg is stored, secondary containment and emergency plans to manage any potential spills must be in place. In all cases design storage to prevent discharge to storm water.

**Emergency procedures** In the event of spillage alert the fire brigade to location and give brief description of hazard. Stop the source of the leak, if safe to do so. Shut off all possible sources of ignition. Wear protective equipment to prevent skin, eye and respiratory exposure. Clear area of any unprotected personnel. Prevent by whatever means possible any spillage from entering drains, sewers, or water courses. (If this occurs contact your regional council immediately).

**Clean-up method**

Collect and seal in properly labelled containers or drums for disposal. If contamination of

<b>Disposal</b>	crops, sewers or waterways has occurred advise local emergency services. Carefully sweep up and collect recoverable material into labelled containers for recycling or salvage. Recycle containers wherever possible. This material may be suitable for approved landfill. Dispose of only in accord with all regulations.
<b>Precautions</b>	Wear protective equipment to prevent skin and eye contamination and the inhalation of dusts. Work up wind or increase ventilation.

**7. Storage & Handling**

<b>Storage</b>	Keep container tightly closed. Store in a cool, dry, well ventilated place. Store in original container. Store away from incompatible materials listed in section 10.
<b>Handling</b>	Keep exposure to a minimum, and minimise the quantities kept in work areas. See section 8 with regard to personal protective equipment requirements.



**8. Exposure Controls / Personal Protective Equipment**

**Workplace Exposure Standards**  
A workplace exposure standard (WES) has not been established by WorkSafe NZ for this product. There is a general limit of 3mg/m<sup>3</sup> for respirable particulates and 10mg/m<sup>3</sup> for inhalable particulates when limits have not otherwise been established.

NZ Workplace Exposure Stds	Ingredient	WES-TWA*	WES-STEL
	Copper sulphate	1.0 mg/m <sup>3</sup> (as Cu dust)	data unavailable
	Zinc sulphate	10mg/m <sup>3</sup> (as Zn dust)	data unavailable

**Engineering Controls**  
In industrial situations, it is expected that employee exposure to hazardous substances will be controlled to a level as far below the WES as practicable by applying the hierarchy of control required by the Health and Safety at Work Act (2015) and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016. Exposure can be reduced by process modification, use of local exhaust ventilation, capturing substances at the source, or other methods. If you believe airborne concentrations of mists, dusts or vapours are high, you are advised to modify processes or increase ventilation.

**Personal Protective Equipment**

<b>Eyes</b>		Avoid contact with eyes. Use safety glasses and or chemical splash goggles if splashes are possible. Select eye protection in accordance with AS/NZS 1337.
<b>Skin</b>		Avoid repeated or prolonged skin contact. Wear overalls, rubber boots and impervious gloves. Nitrile or rubber gloves are recommended. Protective gloves or suitably resistant material must comply with AS 2161. Replace frequently. Gloves should be checked for tears or holes before use. Protective clothing must comply with AS 2919, AS3765.1 or AS3765.2. PVC or rubber boots must comply with AS/NZS 2210.2 and selected and maintained in accordance with AS/NS2210.1. Remove protective clothing and wash exposed areas with soap and water prior to eating, drinking or smoking. Wash hands after handling.
<b>Respiratory</b>		A respirator when airborne concentrations approach the WES (section 8). Respirators must have filters appropriate to the duty and comply with AS/NZS1716 and selected, used and maintained in accordance with AS/NS 1715. Use a respirator with a particulate filter. If using a respirator, ensure that the cartridges are correct for the potential air contamination and are in good working order. Fit testing and clear guidelines and training for use and maintenance of PPE are necessary.

**WES Additional Information**  
Not applicable

**9. Physical & Chemical Properties**

<b>Appearance</b>	green solid
<b>Odour</b>	not specified
<b>pH</b>	not available
<b>Vapour pressure</b>	no data
<b>Viscosity</b>	no data
<b>Boiling point</b>	no data
<b>Volatile materials</b>	no data
<b>Freezing / melting point</b>	no data
<b>Solubility</b>	not available
<b>Specific gravity / density</b>	not available
<b>Flash point</b>	no data

Danger of explosion	no data
Auto-ignition temperature	no data
Upper & lower flammable limits	no data
Corrosiveness	no data

## 10. Stability & Reactivity

<b>Stability</b>	May explode under confinement and high temperatures but not readily detonated. Hygroscopic: absorbs moisture or water from surrounding air.
<b>Conditions to be avoided</b>	Containers should be kept closed in order to avoid contamination. Keep from extreme heat and open flames.
<b>Incompatible groups</b>	Reducing agents. Combustible material. Strong acids. Tetranitromethane, Dichloroisocyanuric acid, trichloroisocyanuric acid, halogen and halogen compounds, hypochlorite, perchlorate, chloroisocyanurate, nitrates and metal powder.
<b>Substance Specific Incompatibility</b>	none known
<b>Hazardous decomposition products</b>	Ammonia, nitrogen (NO <sub>x</sub> ), potassium oxides, sulphur oxides (SO <sub>x</sub> ).
<b>Hazardous reactions</b>	none known

## 11. Toxicological Information

### Summary

IF SWALLOWED: may cause discomfort if swallowed.

IF IN EYES: causes serious eye irritation.

IF ON SKIN: dust may irritate skin.

IF INHALED: dust may cause respiratory irritation.

### Supporting Data

<b>Acute</b>	<b>Oral</b>	Using LD <sub>50</sub> 's for ingredients, the calculated LD <sub>50</sub> (oral, rat) for the mixture is >5,000 mg/kg. Data considered includes: ammonium nitrate 2217 mg/kg (rat), Copper sulphate 125mg/kg (rabbit), Ammonium phosphate dibasic 6500mg/kg, Potassium sulphate 6600mg/kg (rat), zinc sulphate 926mg/kg (mouse).
	<b>Dermal</b>	No evidence of dermal toxicity.
	<b>Inhaled</b>	Using LC <sub>50</sub> 's for ingredients, the calculated LC <sub>50</sub> (inhalation, rat) for the mixture is >5mg/L. Data considered includes: ammonium nitrate >88.8 mg/L (rat), Ammonium phosphate dibasic 8.1mg/L.
	<b>Eye</b>	The mixture is considered to be an eye irritant, because some of the ingredients present are considered eye irritants in more concentrated form.
	<b>Skin</b>	The mixture is considered to be a skin irritant, because some of the ingredients present are considered skin irritants in more concentrated form.
<b>Chronic</b>	<b>Sensitisation</b>	The mixture is considered to be a contact sensitizer, because copper sulphate present in greater than 0.1% is known to be a contact sensitizer.
	<b>Mutagenicity</b>	No ingredient present at concentrations > 0.1% is considered a mutagen.
	<b>Carcinogenicity</b>	No ingredient present at concentrations > 0.1% is considered a carcinogen.
	<b>Reproductive / Developmental</b>	No ingredient present at concentrations > 0.1% is considered a reproductive or developmental toxicant or have any effects on or via lactation.
	<b>Systemic</b>	No ingredient present at concentrations > 1% is considered a target organ toxicant.
	<b>Aggravation of existing conditions</b>	None known.

## 12. Ecological Data

### Summary

This mixture may be harmful towards aquatic organism with long lasting effects if undiluted.

### Supporting Data

<b>Aquatic</b>	Using EC <sub>50</sub> 's for ingredients, the calculated EC <sub>50</sub> for the mixture is between 10 mg/L and 100 mg/L. Data considered includes: ammonium nitrate 74 mg/l (48hr) fish, 111 - 840 mg/L (48hr) (Crustacea) 83 mg/l (algae), Copper sulphate 0.0028mg/L (acute, 96hr, Fathead minnow), 0.0014mg/L (48hr, waterflea), 0.005mg/L (72hr, seawater algae), Ammonium phosphate dibasic 40mg/L (96hr, gammarus pseudolimnaeus), Potassium sulphate LC <sub>50</sub> : 1530mg/L (96hr, fish), 720mg/L (48h, crustaceans),, zinc sulphate 98.77ug/L (96hr, Oncorhynchus mykiss), 0.09877mg/L (48hr, Daphnia hyalina), 0.02469mg/L (5d, Ditylum brightwellii Diatom).
<b>Bioaccumulation</b>	No data
<b>Degradability</b>	No data
<b>Soil</b>	No evidence of soil toxicity.

Terrestrial vertebrate	See acute toxicity.
Terrestrial invertebrate	No evidence of toxicity towards terrestrial invertebrates.
Biocidal	no data

### 13. Disposal Considerations

<b>Restrictions</b>	There are no product-specific restrictions, however, local council and resource consent conditions may apply, including requirements of trade waste consents.
<b>Disposal method</b>	Disposal of this product must comply with the Hazardous Substances (Disposal) Notice 2017 and the requirements of the Resource Management Act for which approval should be sought from the Regional Authority. The substance must be treated and therefore rendered non-hazardous before discharge to the environment.
<b>Contaminated packaging</b>	Disposal of contaminated packaging must comply with the Hazardous Substances (Disposal) Notice 2017 clause 12. Ensure that the package is rendered incapable of containing any substance and is disposed in a manner that is consistent with the requirements of the substance it contained and the material of the package. If possible reuse or recycle packaging.

### 14. Transport Information

#### Land Transport Rule: Dangerous Goods 2005 - NZS 5433:2007

Transport according to NZS 5433 (Transport of Hazardous Substances on Land). Considered a dangerous good for transport.

<b>UN number:</b>	2071	<b>Proper shipping name:</b>	AMMONIUM NITRATE BASED FERTILISER
<b>Class(es)</b>	9	<b>Packing group:</b>	III
<b>Precautions</b>	Read safety instructions, SDS and emergency procedures before handling.	<b>Hazchem code:</b>	1Z

### 15. Regulatory Information

This product is an approved substance under the Hazardous Substances and New Organisms Act (HSNO). Approval code: HSR002571, Fertilisers (Subsidiary Hazard) Group Standard 2017. All ingredients appear on the New Zealand Inventory of Chemicals NZIoC.

#### Specific Controls

Key workplace requirements are:

SDS	To be available within 10 minutes in workplaces storing any quantity.
Inventory	An inventory of all hazardous substances must be prepared and maintained.
Packaging	All hazardous substances should be appropriately packaged including substances that have been decanted, transferred or manufactured for own use or have been supplied
Labelling	Must comply with the Hazardous Substances (Labelling) Notice 2017.
Emergency plan	Required if > 1000kg is stored.
Certified handler	Not required.
Tracking	Not required.
Bundling & secondary containment	Required if > 1000kg is stored.
Signage	Required if > 1000kg is stored.
Location compliance certificate	Not required.
Flammable zone	Not required.
Fire extinguisher	Not required.

Note: The above workplace requirements apply if only this particular substance is present. The complete set of controls for a location will depend on the classification and total quantities of other substances present in that location.

#### Other Legislation

In New Zealand, the use of this product may come under the Resource Management Act and Regulations, the Health and Safety at Work Act 2015 and the Health and Safety at Work (General Risk and Workplace Management) Regulations 2016, local Council Rules and Regional Council Plans.

**16. Other Information**

**Abbreviations**

<b>Approval Code</b>	Approval HSR002571, Fertilisers (Subsidiary Hazard) Group Standard 2017 Controls, EPA. <a href="http://www.epa.govt.nz">www.epa.govt.nz</a>
<b>CAS Number</b>	Unique Chemical Abstracts Service Registry Number
<b>EC<sub>50</sub></b>	Ecotoxic Concentration 50% – concentration in water which is fatal to 50% of a test population (e.g. daphnia, fish species)
<b>EPA</b>	Environmental Protection Authority (New Zealand)
<b>GHS</b>	Globally Harmonised System of Classification and Labelling of Chemicals
<b>HAZCHEM Code</b>	Emergency action code of numbers and letters that provide information to emergency services, especially fire fighters
<b>HSNO</b>	Hazardous Substances and New Organisms (Act and Regulations)
<b>IARC</b>	International Agency for Research on Cancer
<b>LEL/UEL</b>	Lower Explosive Limit/ Upper Explosive Limit
<b>LD<sub>50</sub></b>	Lethal Dose 50% – dose which is fatal to 50% of a test population (usually rats).
<b>LC<sub>50</sub></b>	Lethal Concentration 50% – concentration in air which is fatal to 50% of a test population (usually rats)
<b>MSDS (SDS)</b>	Material Safety Data Sheet (or Safety Data Sheet)
<b>NZIoC</b>	New Zealand Inventory of Chemicals
<b>STEL</b>	Short Term Exposure Limit - The maximum airborne concentration of a chemical or biological agent to which a worker may be exposed in any 15 minute period, provided the TWA is not exceeded
<b>TWA</b>	Time Weighted Average – generally referred to WES averaged over typical work day (usually 8 hours)
<b>UN Number</b>	United Nations Number
<b>WES</b>	Workplace Exposure Standard - The airborne concentration of a biological or chemical agent to which a worker may be exposed during work hours (usually 8 hours, 5 days a week). The WES relates to exposure that has been measured by personal monitoring using procedures that gather air samples in the worker's breathing zone.

**References**

<b>Data</b>	Unless otherwise stated comes from the EPA HSNO chemical classification information database (CCID).
<b>Controls</b>	EPA notices, <a href="http://www.epa.govt.nz">www.epa.govt.nz</a> , Health and Safety at Work (Hazardous Substances) Regulations 2017, <a href="http://www.legislation.govt.nz">www.legislation.govt.nz</a>
<b>WES</b>	The latest NZ Workplace Exposure Standards, published by WorkSafe NZ and available on their web site – <a href="http://www.worksafe.govt.nz">www.worksafe.govt.nz</a> .
<b>ES</b>	Workplace Exposure standards for airborne contaminants – Safework Australia.
<b>Other References:</b>	Suppliers SDS, EU ECHA, ingredients SDS's, ChemIDplus

**Review**

<b>Date</b>	<b>Reason for review</b>
January 2020	Not applicable – new SDS

**Disclaimer**

This SDS was prepared by Datachem LTD and is based on our current state of knowledge, including information obtained from suppliers. The SDS is given in good faith and constitutes a guideline (not a guarantee of safety). The level of risk each substance poses is relevant to its properties (as summarised in the SDS) AND HOW THE SUBSTANCE IS USED. While guidelines are given for personal protective equipment, such precautions must be relevant to the use. The likely HSNO classifications for this SDS have been estimated based on general information from the supplier (e.g., hazard, toxicological). This SDS is copyright Datachem and must not be copied, edited or used for other than intended purpose. To contact the SDS author, email [info@datachem.co.nz](mailto:info@datachem.co.nz) or phone: +64 9 940 30 80.

