



## SAFETY DATA SHEET

### Section 1. Identification of the material and the supplier

Product: **Hakaphos Calcidic N-Max**  
Item Code:  
Product Use: Fertiliser  
Restriction of Use: Refer to Section 15

New Zealand Supplier: HortFertplus  
Address: 7C Vega Place  
Rosedale, Auckland, 0632  
Telephone: +64 9 478 5585  
Fax Number: +64 9 478 5586

**Emergency Telephone: 0800 764 766 (National Poison Centre)**

Date of SDS Preparation: 4 May 2017

### Section 2. Hazards Identification

**This substance is hazardous according to the *HSNO (Minimum Degrees of Hazard) Regulations 2001***

**EPA Approval No: Fertilisers (oxidising) – HSR002570**

#### Pictograms



Oxidiser



Toxic



Corrosive

Signal Word: **DANGER**

HSNO Classification	Hazard Code	Hazard Statement	GHS Category
5.1.1C	H272	May intensify fire oxidiser.	Category 3
6.1D (oral)	H302	Harmful if swallowed.	Category 4
6.3B	H316	Causes mild skin irritation.	Category 3
8.3A	H318	Causes serious eye damage.	Category 1
9.1D	H402	Harmful to aquatic life.	Category 4

Prevention Code	Prevention Statement
P102	Keep out of reach of children.
P103	Read label before use.
P210	Keep away from heat, sparks, open flames or hot surfaces. No smoking.
P220	Keep or store away from clothing or combustible materials.

P221	Take any precaution to avoid mixing with combustibles.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
P280	Wear protective clothing.

Response Code	Response Statement
P101	If medical advice is needed, have product container or label at hand.
P310	Immediately call a POISON CENTER or doctor/physician.
P330	Rinse mouth.
P301 + P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P305 + P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P332 + P313	If skin irritation occurs: Get medical advice/ attention.
P370 + P378	In case of fire: Use water for extinction.

Storage Code	Storage Statement
None allocated	

Disposal Code	Disposal Statement
P501	Dispose of according to Local Regulations or Authorities

### Section 3. Composition / Information on Ingredients

Ingredients	Wt%	CAS NUMBER.
Ammonium Nitrate	≥10-<45	6484-52-2
Potassium Nitrate	>10-<20	7757-79-1
Potassium Pentahydrogen bis(phosphate)	≥10-<20	14887-42-4
Nitric Acid, ammonium Calcium Salt	≥10-<20	15245-12-2
Disodium tetraborate pentahydrate	≤0.05	12179-04-3

### Section 4. First Aid Measures

Routes of Exposure:

If in Eyes	Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice.
If on Skin	Wash with plenty of soap and water. Wash contaminated clothing before reuse. If skin irritation or rash occurs: get medical advice/attention.
If Swallowed	Clean mouth with water and drink afterwards plenty of water. Call a POISON CENTER or doctor/physician if you feel unwell.
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. Get medical advice if breathing becomes difficult. In case of lung irritation, first treatment with dexametason aerosol (spray).

### Section 5. Fire Fighting Measures

<b>Hazard Type</b>	Non-combustible substance with oxidizing ingredient
<b>Hazards from combustion</b>	At temperatures above 130 °C, dangerous decomposition gases can be emitted:

<b>products</b>	Nitrogen monoxide, nitrogen dioxide, dinitrogen oxide, ammonia Oxides of phosphorus
<b>Suitable Extinguishing media</b>	Water Unsuitable: Foam, Dry chemical, Carbon dioxide (CO <sub>2</sub> ), Sand
<b>Precautions for firefighters and special protective clothing</b>	Self-contained breathing apparatus. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
<b>HAZCHEM CODE</b>	<b>1Y</b>

## **Section 6. Accidental Release Measures**

Wear protective equipment as detailed in Section 8. Clear area of any unprotected personnel.

For cleanup use mechanical handling equipment. Keep in suitable, closed containers for disposal.

Do not empty into drains. Retain and dispose of contaminated wash water.

## **Section 7. Handling and Storage**

### **Precautions for Handling:**

- Read label before use.
- Keep away from heat, sparks, open flames or hot surfaces. No smoking.
- Keep or store away from clothing or combustible materials.
- Take any precaution to avoid mixing with combustibles.
- Wash hands thoroughly after handling.
- Do not eat, drink or smoke when using this product.
- Avoid release to the environment.
- Wear protective clothing.
- Avoid dust formation.
- Keep away from direct sunlight.
- Keep away from heat.
- Protect from contamination.
- Protect from moisture.

### **Precautions for Storage:**

- Protect against humidity (product is hygroscopic and tends to cake or disintegrate)
- Store away from combustible materials.
- Protect from contamination.
- When stored loose do not mix with other fertilizers.
- Protect from moisture.
- Keep out of reach of children.
- Keep in a dry place.

## **Section 8 Exposure Controls / Personal Protection**

### **Occupational Exposure Limits**

#### **Control parameters**

3 mg/m<sup>3</sup> (Dust entering alveoli), 10 mg/m<sup>3</sup> (inhalable dust)

DNEL

Ammonium Nitrate	<p>: End Use: Workers          Exposure routes: Inhalation          Potential health effects: Specific effects          Exposure time: 1 d          Value: 37,6 mg/m<sup>3</sup></p> <p>End Use: Workers          Exposure routes: Skin contact          Potential health effects: Specific effects          Exposure time: 1 d          Value: 21,3 mg/kg</p> <p>End Use: Consumers          Exposure routes: Ingestion          Potential health effects: Specific effects          Exposure time: 1 d          Value: 12,8 mg/kg</p> <p>End Use: Consumers          Exposure routes: Ingestion          Potential health effects: Specific effects          Exposure time: 1 d          Value: 12,8 mg/kg</p> <p>End Use: Consumers          Exposure routes: Inhalation          Potential health effects: Specific effects          Exposure time: 1 d          Value: 11,1 mg/m<sup>3</sup></p>
potassium nitrate	<p>: End Use: Workers          Exposure routes: Inhalation          Potential health effects: Systemic effects          Value: 36,7 mg/m<sup>3</sup></p> <p>End Use: Workers          Exposure routes: Skin contact          Potential health effects: Systemic effects          Exposure time: 1 d          Value: 20,8 mg/kg</p> <p>End Use: Consumers          Exposure routes: Ingestion          Potential health effects: Systemic effects          Exposure time: 1 d          Value: 12,5 mg/kg</p> <p>End Use: Consumers          Exposure routes: Skin contact          Potential health effects: Systemic effects          Exposure time: 1 d          Value: 12,5 mg/kg</p>
Potassium pentahydrogen bis(phosphate)	<p>: End Use: Workers          Exposure routes: Inhalation          Value: 4,07 mg/m<sup>3</sup>          Continuous exposure</p> <p>End Use: Consumers          Exposure routes: Inhalation          Value: 3,04 mg/m<sup>3</sup>          Continuous exposure</p>
nitric acid, ammonium calcium salt	<p>: End Use: Workers          Exposure routes: Inhalation          Potential health effects: Specific effects          Exposure time: 1 DAY          Value: 24,5 mg/m<sup>3</sup></p>

End Use: Workers  
 Exposure routes: Skin contact  
 Potential health effects: Specific effects  
 Exposure time: 1 DAY  
 Value: 13,9 mg/kg

End Use: Consumers  
 Exposure routes: Inhalation  
 Potential health effects: systemic effects  
 Value: 6,3 mg/m<sup>3</sup>

End Use: Consumers  
 Exposure routes: Skin contact  
 Potential health effects: systemic effects  
 Value: 8,33 mg/kg

End Use: Consumers  
 Exposure routes: Ingestion  
 Potential health effects: systemic effects  
 Exposure time: 1 DAY  
 Value: 8,33 mg/kg

### Engineering Controls

Provide adequate ventilation.

### Personal Protection

<b>Eyes</b>	Tightly fitting safety goggles with side shields.
<b>Hands and Skin</b>	Chemical resistant protective gloves (EN 374). The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other.
<b>Respiratory</b>	Breathing apparatus only if aerosol or dust is formed. Particle filter EN 143 Type P1, low efficiency, (solid particles of inert substances).
<b>General</b>	At the end of the shift the skin should be cleaned and skin care agents applied.

## Section 9 Physical and Chemical Properties

<b>Appearance</b>	Crystalline – various colours
<b>Odour</b>	Odourless
<b>Odour Threshold</b>	Not available
<b>pH</b>	ca. 2,0 – 2,3, Concentration: 100,00g/l (20 °C)
<b>Boiling Point</b>	Not available
<b>Melting Point</b>	Not available
<b>Freezing Point</b>	Not available
<b>Flash Point</b>	Not available
<b>Flammability</b>	None
<b>Upper and Lower Explosive Limits</b>	Not available
<b>Vapour Pressure</b>	Not available
<b>Vapour Density</b>	Not available
<b>Relative Density</b>	Not available
<b>Bulk Density</b>	ca. 1.150 kg/m <sup>3</sup>
<b>Solubilities</b>	Soluble
<b>Partition Coefficient:</b>	Not available
<b>Auto-ignition Temperature</b>	Not available
<b>Decomposition Temperature</b>	>130 <sup>o</sup> C To avoid thermal decomposition, do not overheat. The product is

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 Tel: 64 9 475 5240 www.techcomp.co.nz

	capable of self-sustaining progressive thermal decomposition.
<b>Kinematic Viscosity</b>	Not available
<b>Particle Size</b>	Not available
<b>Oxidizing properties</b>	The substance or mixture is classified as oxidizing with the category 3. Manual of tests and criteria. Test O.1 (United Nations Recommendations on the Transport of Dangerous Goods).

## Section 10. Stability and Reactivity

<b>Stability of Substance</b>	This product is stable under normal conditions.
<b>Conditions to Avoid</b>	Corrosive to metals Contact with water or moist air liberates phosphoric acid.
<b>Incompatible Materials</b>	Sulphur, chlorites, chloride, chlorates, Hypochlorites, acid or alkaline reacting substances, flammable oxidizable substances, nitrites, metallic salts, metallic powder, herbicide, chlorinated hydrocarbons, organic compounds.
<b>Hazardous Decomposition Products</b>	Nitrogen monoxide, nitrogen dioxide, dinitrogen oxide, ammonia. Oxides of phosphorus.

## Section 11 Toxicological Information

### Acute Effects:

<b>Swallowed</b>	Harmful if swallowed. Mixture Rules Calculation= LD50 = 997mg/kg.
<b>Dermal</b>	Not applicable.
<b>Inhalation</b>	Not applicable.
<b>Eye</b>	Causes severe eye damage
<b>Skin</b>	Causes mild skin irritation.

### Chronic Effects:

<b>Carcinogenicity</b>	Not applicable.
<b>Reproductive Toxicity</b>	Not applicable.
<b>Germ Cell Mutagenicity</b>	Not applicable.
<b>Aspiration</b>	Not applicable.
<b>STOT/SE</b>	Not applicable.
<b>STOT/RE</b>	Not applicable.

## Section 12. Ecotoxicological Information

HSNO Classes: 9.1D = Toxic to aquatic life.

PNEC

Ammonium Nitrate

: Fresh water  
Value: 0,45 mg/l

Marine water Value:  
0,045 mg/l

Ceiling Limit Value  
Value: 4,5 mg/l

potassium nitrate

: Fresh water  
Value: 0,45 mg/l

Marine water Value:  
0,045 mg/l

	Ceiling Limit Value Value: 4,5 mg/l
Potassium pentahydrogen bis(phosphate)	: Fresh water Value: 0,05 mg/l
	Marine water Value: 0,005 mg/l
	Intermittent use/release Value: 0,5 mg/l
	Behaviour in waste water treatment plants Value: 50 mg/l
nitric acid, ammonium calcium salt	: Fresh water Value: 0,45 mg/l
	Marine water Value: 0,045 mg/l
	Ceiling Limit Value Value: 4,5 mg/l

<b>Persistence and degradability</b>	The product works in the soil as fertilizer and is diminished in a few weeks.
<b>Bioaccumulation</b>	Bioaccumulation is unlikely.
<b>Mobility in Soil</b>	Groundwater contamination is unlikely.
<b>Other adverse effects</b>	There is a high probability that the product is acute not harmful to aquatic organisms., Additional ecological information, The product has not been tested. The information is derived from the properties of the individual components., At higher pH values, which can be found in natural surface waters, an increase of toxic effects on aquatic organisms may be expected.

Do not allow to enter waterways.

### Section 13. Disposal Considerations

**Disposal Method:** Contaminated packaging should be emptied as far as possible; then it can be passed on for recycling after being thoroughly cleaned. Ensure waste container holding any unwanted product or contaminated spill media is labelled "Hazardous Waste - Oxidiser"

**Precautions:** depositing the substance in a landfill provided the landfill is managed to ensure that—

- (i) the substance will not at any time come into contact with an explosive or flammable substance (equivalent to HSNO class 1, 2, 3 or 4); and
- (ii) there is no ignition source in the vicinity of the disposal site that is capable of igniting the substance; and
- (iii) if the substance were to combust, or cause or contribute to combustion, no person or place where a person may legally be, would be exposed to more blast overpressure or heat radiation than that described in regulation 7(3)(b) of the Hazardous Substances (Disposal) Regulations 2001; and
- (iv) the concentration of the substance in any discharge from the landfill does not, after reasonable mixing, exceed any relevant

tolerable exposure limit and/or environmental exposure limit set for the substance or any of its component(s).

**Disposal methods to avoid:** Do not allow to enter waterways

## Section 14 Transport Information

**This product is classified as a Dangerous Good for transport in NZ ; NZS 5433:2012**

### Road and Rail Transport

UN No: 1479  
Class-primary 5.1  
Packing Group III  
Proper Shipping Name: (OXIDIZING SOLID, N.O.S, Potassium Nitrate)

### Air Transport

UN No: 1479  
Class-primary 5.1  
Packing Group III  
Proper Shipping Name: (OXIDIZING SOLID, N.O.S, Potassium Nitrate)

### Marine Transport

UN No: 1479  
Class-primary 5.1  
Packing Group III  
Proper Shipping Name: (OXIDIZING SOLID, N.O.S, Potassium Nitrate)  
Marine Pollutant: No

## Section 15 Regulatory Information

EPA Approval Code: Fertilisers (oxidising) – HSR002570

HSNO Classification: 5.1.1C, 6.1D (oral), 6.3B, 8.3A, 9.1D

HSNO Controls:

### **Trigger quantities:**

	<b>Trigger Quantity</b>
Approved Handler	1000L/kg
Location Certificate	1000L/kg (storage)
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	1000L/kg
Emergency Response Plan	5000L/kg
Secondary Containment	5000L/kg
Restriction of Use	None

## Section 16 Other Information

### **Glossary**

EC <sub>50</sub>	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
LC <sub>50</sub>	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD <sub>50</sub>	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



UEL  
WES

authority.  
Upper Explosive Level  
Workplace Exposure Limit

1. HSNO Approved Code of Practice: Preparation of Safety Data Sheets, September 2006.

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Please contact the New Zealand distributor, if further information is required.

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