

SAFETY DATA SHEET

Section 1. Identification of the material and the supplier

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

New Zealand Supplier: Horticulture Ltd
 Address: 10 Firth Street
 Drury, 2114

Telephone: +64 9 294 8453
 Fax Number: +64 9 294 7272

Emergency Telephone: 0800 764 766 (National Poison Centre)

Date of SDS Preparation: 22 August 2022 v2

Section 2. Hazards Identification

Classified as hazardous as per EPA Hazardous Substances (Classification) Notice 2020.

EPA Approval No: Fertilisers (oxidising) – HSR002570

Pictograms



Oxidiser



Toxic



Corrosive

Signal Word: **DANGER**

GHS Classification and Category	Hazard Code	Hazard Statement
Oxidising solids Cat. 3	H272	May intensify fire oxidiser.
Acute oral toxicity Cat. 4	H302	Harmful if swallowed.
Serious eye damage Cat. 1	H318	Causes serious eye damage.
Hazardous to terrestrial vertebrates	H433	Hazardous to terrestrial vertebrates

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.
Potassium Nitrate	>10-<50	7757-79-1
Potassium Pentahydrogen bis(phosphate)	≥10-<25	14887-42-4
Nitric Acid, ammonium Calcium Salt	≥10-<25	15245-12-2

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. If skin irritation occurs: get medical advice/attention.
If Swallowed	Rinse mouth. 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).

Most important symptoms and effects, both acute and delayed

Symptoms:

Inhalation:	Not applicable.
Ingested:	Harmful if swallowed.
Skin:	May cause mild skin irritation.
Eye:	Causes serious eye damage.

Section 5. Fire Fighting Measures

Hazard Type	Non-combustible substance with oxidizing ingredient
Hazards from combustion products	At temperatures above 130 °C, dangerous decomposition gases can be emitted: Nitrogen monoxide, nitrogen dioxide, dinitrogen oxide, ammonia Oxides of phosphorus
Suitable Extinguishing media	Water Unsuitable: Foam, Dry chemical, Carbon dioxide (CO ₂), Sand
Precautions for firefighters and special protective clothing	Self-contained breathing apparatus. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.
HAZCHEM CODE	1Y

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/m³ (Dust entering alveoli), 10 mg/m³ (inhalable dust)

DNEL

potassium nitrate : End Use: Workers

Exposure routes: Inhalation
Potential health effects: Systemic effects
Value: 36,7 mg/m³

End Use: Workers
Exposure routes: Skin contact
Potential health effects: Systemic effects
Exposure time: 1 d
Value: 20,8 mg/kg

End Use: Consumers
Exposure routes: Ingestion
Potential health effects: Systemic effects
Exposure time: 1 d
Value: 12,5 mg/kg

End Use: Consumers Exposure
routes: Skin contact
Potential health effects: Systemic effects
Exposure time: 1 d
Value: 12,5 mg/kg
Exposure time: 1 DAY
Value: 8,33 mg/kg

Potassium pentahydrogen
bis(phosphate)

: End Use: Workers
Exposure routes: Inhalation
Value: 4,07 mg/m³
Continuous exposure
End Use: Consumers

Exposure routes: Inhalation
Value: 3,04 mg/m³
Continuous exposure

nitric acid, ammonium calcium
salt

: End Use: Workers
Exposure routes: Inhalation
Potential health effects: Specific effects
Exposure time: 1 DAY
Value: 24,5 mg/m³

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/m³

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

PNEC

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

Engineering Controls

Provide adequate ventilation.

Personal Protection Equipment



Eyes	Tightly fitting safety goggles with side shields.
Hands and Skin	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.
Respiratory	Breathing apparatus only if aerosol or dust is formed. Particle filter EN 143 Type P1, low efficiency, (solid particles of inert substances).
General	At the end of the shift the skin should be cleaned and skin care agents applied.

Section 9 Physical and Chemical Properties

Appearance	Crystalline – various colours
Odour	Odourless
Odour Threshold	Not available
pH	ca. 2,0 – 2,3, Concentration: 100,00g/l (20 °C)
Boiling Point	Not available
Melting Point	Not available
Freezing Point	Not available
Flash Point	Not available
Flammability	None
Upper and Lower Explosive Limits	Not available

Vapour Pressure	Not available
Vapour Density	Not available
Relative Density	Not available
Bulk Density	ca. 1.150 kg/m ³
Solubilities	Soluble
Partition Coefficient:	Not available
Auto-ignition Temperature	Not available
Decomposition Temperature	Not available
Kinematic Viscosity	Not available
Particle Size	Not available
Oxidizing properties	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

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

Section 11 Toxicological Information

Acute Effects:

Swallowed	Harmful if swallowed. Mixture Rules Calculation= LD50 = 666mg/kg.
Dermal	Not applicable.
Inhalation	Not applicable.
Eye	Causes severe eye damage
Skin	Not applicable.

Chronic Effects:

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

Section 12. Ecotoxicological Information

Hazardous to terrestrial vertebrates

Persistence and degradability	The product works in the soil as fertilizer and is diminished in a few weeks.
Bioaccumulation	Bioaccumulation is unlikely.
Mobility in Soil	Groundwater contamination is unlikely.
Other adverse effects	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.
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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 5433:2020 and SNZ HB 5433:2021



Road, Rail, Sea and Air Transport

UN No	1479
Class - Primary	5.1
Packing Group	III
Proper Shipping Name	(OXIDIZING SOLID, N.O.S, Potassium Nitrate)
Marine Pollutant	No
Special Provisions	If the product's individual container is below 5L/kg, it can be transported as a non-DG as long as the product packaging is still labelled as per DG requirements and the driver is given safety information in accordance with Chapter 3.4 of the UNRTDG.

Section 15 Regulatory Information

EPA Approval Code: Fertilisers (oxidising) – HSR002570

HSW (HS) Regulations 2017 and EPA Notices	Trigger Quantity
Certified Handler	Not required
Location Certificate	1000kg(closed) / 100kg (open)
Tracking Trigger Quantities	Not required
Signage Trigger Quantities	1000kg
Emergency Response Plan	5000kg
Secondary Containment	5000kg
Restriction of Use	Only use for the intended purpose.

Section 16 Other Information

Glossary

Cat	Category
EC ₅₀	Median effective concentration.
EEL	Environmental Exposure Limit.
EPA	Environmental Protection Authority
HSNO	Hazardous Substances and New Organisms.
HSW	Health and Safety at Work.
LC ₅₀	Lethal concentration that will kill 50% of the test organisms inhaling or ingesting it.
LD ₅₀	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 authority.
UEL	Upper Explosive Level
WES	Workplace Exposure Limit

References:

1. EPA Hazardous Substances (Safety Data Sheets) Notice 2017
2. Workplace Exposure Standards and Biological Exposure Indices April 2022 edition.
3. Assigning a hazardous substance to a HSNO Approval (Aug 2013).
4. Transport of Dangerous goods on land NZS 5433:2020
5. HSW (Hazardous Substances) Regulations 2017

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

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