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# SAFETY DATA SHEET

**KRISTA K PLUS**

## Section 1. Identification

**Product name** : KRISTA K PLUS  
**Product type** : Solid (Crystalline solid.)  
**Product code** : PZ004K

**Uses**

**Area of application** : Professional applications  
**Material uses** : Fertilizers.

**Supplier**

**Supplier's details** : Yara Fertilizers (New Zealand) Limited

**Address**

**Street** : 4/211 Heretaunga Street East  
**Postal code** : 4122  
**City** : Hastings  
**Country** : New Zealand

**P.O. Box Address**

**P.O. Box** : 8746  
**Postal code** : 4157  
**City** : Hastings  
**Country** : New Zealand

**Telephone number** : +64 6 877 6600  
**e-mail address of person responsible for this SDS** : nz.enquiries@yara.com  
**Emergency telephone number (with hours of operation)** : +64 9929 1483 (7/24)

**National advisory body/Poison Center**

**Name** : New Zealand National Poisons Centre  
**Telephone number** : 0800 POISON = 0800 764 766 (NZ only) / +64 3 479 7248 (outside NZ)  
**Hours of operation** : 24h

## Section 2. Hazards identification

**HSNO Classification** : OXIDIZING SOLIDS - Category 3

**GHS label elements**

**Hazard pictograms** :



**Signal word** : Warning

**Hazard statements** : H272 May intensify fire; oxidizer.

**Precautionary statements**

**Prevention** : P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P220 Keep away from clothing and other combustible materials.

**Response** : P370 In case of fire:  
P378-b Use flooding quantities of water to extinguish.

**Other hazards which do not result in classification** : None known.

**Additional information** : Product forms slippery surface when combined with water.

### Section 3. Composition/information on ingredients

**Substance/mixture** : Substance

**CAS number/other identifiers**

**Other means of identification** : Potassium nitrate

**CAS number** : 7757-79-1

**EC number** : 231-818-8

Ingredient name	% (w/w)	CAS number
potassium nitrate	100	7757-79-1

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

### Section 4. First aid measures

**Description of necessary first aid measures**

**Eye contact** : Rinse with plenty of running water. Check for and remove any contact lenses. Get medical attention if irritation occurs.

**Inhalation** : If inhaled, remove to fresh air. In case of inhalation of decomposition products in a fire, symptoms may be delayed.

- The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Wash with soap and water. Get medical attention if irritation develops.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.

### **Most important symptoms/effects, acute and delayed**

#### **Potential acute health effects**

- Eye contact** : No known significant effects or critical hazards.
- Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
- Skin contact** : No known significant effects or critical hazards.
- Ingestion** : No known significant effects or critical hazards.

#### **Over-exposure signs/symptoms**

- Eye contact** : No specific data.
- Inhalation** : No specific data.
- Skin contact** : No specific data.
- Ingestion** : No specific data.

### **Indication of immediate medical attention and special treatment needed, if necessary**

- Notes to physician** : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

## **Section 5. Fire-fighting measures**

### **Extinguishing media**

- Suitable extinguishing media** : Use flooding quantities of water for extinction.
- Unsuitable extinguishing media** : Do NOT use chemical extinguisher or foam or attempt to smother the fire with steam or sand.
- Specific hazards arising from the chemical** : Oxidizing material. May intensify fire. The product itself is not combustible but it can support combustion, even in absence of air. On heating it melts and further heating can cause decomposition, releasing toxic fumes containing nitrogen oxides. It has high resistance to detonation. Heating under strong confinement can lead to explosive behaviour.
- Hazardous thermal decomposition products** : Decomposition products may include the following materials: nitrogen oxides, metal oxide/oxides, ammonia, Avoid breathing dusts, vapors or fumes from burning materials., In case of inhalation of decomposition products in a fire, symptoms may be delayed.
- Hazchem or Emergency Action** : Not available.

**Code**

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
- Remark** : Non-explosive.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).
- For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

- Small spill** : Move containers from spill area. If contaminated with combustible material or reactive chemicals, use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Move containers from spill area. If contaminated with combustible material or reactive chemicals, use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

## Section 7. Handling and storage

### Precautions for safe handling

Date of issue : 14.03.2023

Page:4/13

Not for human or animal consumption.

- Precautions for safe handling** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures. Avoid contact with eyes, skin and clothing. Keep away from combustible materials.
- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from clothing, incompatible materials and combustible materials. Keep away from heat. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Advice on general occupational hygiene** : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Separate from reducing agents and combustible materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. Keep away from: organic materials, oil and grease.

## Section 8. Exposure controls/personal protection

### Control parameters

- Occupational exposure limits** : None.
- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of

environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### **Individual protection measures**

**Hygiene measures** : A washing facility or water for eye and skin cleaning purposes should be present. Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Wash contaminated clothing before reusing.

**Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

### **Skin protection**

**Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. For general applications, we recommend gloves with a thickness typically greater than 0.35 mm. It should be emphasized that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material.

**Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved.

**Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

**Respiratory protection** : In case of inadequate ventilation wear respiratory protection.

**Personal protective equipment (Pictograms)** :



## **Section 9. Physical and chemical properties and safety characteristics**

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### **Appearance**

**Physical state** : Solid [Crystalline solid.]  
**Color** : White.,  
**Odor** : Odorless.  
**pH** : 6 - 9 [Conc. (% w/w): 50 g/l ]

**Melting point/freezing point** : 335 °C (635 °F)

**Boiling point, initial boiling point, and boiling range** : Decomposes.

<b>Flash point</b>	: Not applicable.
<b>Flammability</b>	: Non-flammable.
<b>Lower and upper explosion limit/flammability limit</b>	: <b>Lower:</b> Not applicable. <b>Upper:</b> Not applicable.
<b>Vapor pressure</b>	: Not applicable.
<b>Relative vapor density</b>	: Not applicable.
<b>Density</b>	: 2.1 g/cm <sup>3</sup> @ 20 °C (68 °F)
<b>Solubility in water</b>	: 320 g/l @ 20 °C (68 °F)
<b>Partition coefficient: n-octanol/water</b>	: Not applicable.
<b>Auto-ignition temperature</b>	: Not applicable.
<b>Decomposition temperature</b>	: > 600 °C (> 1112 °F)
<b>Viscosity</b>	: <b>Kinematic:</b> Not applicable.
<b>Explosive properties</b>	: Non-explosive.
<b>Oxidizing properties</b>	: Oxidizer UN Model Regulations
<b><u>Particle characteristics</u></b>	
<b>Median particle size</b>	: Not determined.

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Hazardous reactions or instability may occur under certain conditions of storage or use. Conditions may include the following: contact with combustible materials Reactions may include the following: risk of causing or intensifying fire
<b>Conditions to avoid</b>	: Avoid contamination by any source including metals, dust and organic materials.
<b>Remark</b>	: Avoid contact with combustible materials.
<b>Incompatible materials</b>	: Reactive or incompatible with the following materials: alkalis, combustible materials, reducing materials, organic materials, Acids
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

**Information on toxicological effects****Acute toxicity**

Product/ingredient name	Method	Species	Result	Exposure
potassium nitrate				
	LD50 Oral	Rat	2,000 mg/kg	Not applicable.
	LD50 Dermal	Rat	> 5,000 mg/kg	Not applicable.

**Conclusion/Summary** : No known significant effects or critical hazards.

**Irritation/Corrosion**

Product/ingredient name	Method	Species	Result	Exposure
potassium nitrate				
	OECD 404 Skin	Rabbit	Non-irritating.	

**Conclusion/Summary**

**Skin** : Non-irritating.

**Eyes** : Non-irritating.

**Respiratory** : Non-irritating.

**Sensitization****Conclusion/Summary**

**Skin** : Not sensitizing

**Respiratory** : Not sensitizing

**Mutagenicity**

**Conclusion/Summary** : No known significant effects or critical hazards.

**Carcinogenicity**

**Conclusion/Summary** : No known significant effects or critical hazards.

**Reproductive toxicity**

**Conclusion/Summary** : No known significant effects or critical hazards.

**Specific target organ toxicity (single exposure)**

No known significant effects or critical hazards.

**Specific target organ toxicity (repeated exposure)**

No known significant effects or critical hazards.

**Aspiration hazard**

No known significant effects or critical hazards.



**Information on the likely routes of exposure** : Not available.

**Potential acute health effects**

**Eye contact** : No known significant effects or critical hazards.  
**Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.  
**Skin contact** : No known significant effects or critical hazards.  
**Ingestion** : No known significant effects or critical hazards.

**Symptoms related to the physical, chemical and toxicological characteristics**

**Eye contact** : No specific data.  
**Inhalation** : No specific data.  
**Skin contact** : No specific data.  
**Ingestion** : No specific data.

**Delayed and immediate effects and also chronic effects from short and long term exposure**

**Short term exposure**

**Potential immediate effects** : Adverse health effects are considered unlikely, when the product is used according to directions.  
**Potential delayed effects** : None identified.

**Long term exposure**

**Potential immediate effects** : Adverse health effects are considered unlikely, when the product is used according to directions.  
**Potential delayed effects** : None identified.

**Potential chronic health effects**

**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Reproductive toxicity** : No known significant effects or critical hazards.  
**Effects on or via lactation** : No known significant effects or critical hazards.  
**Other effects** : No known significant effects or critical hazards.

**Over-exposure signs/symptoms**

**Eye contact** : No specific data.  
**Inhalation** : No specific data.  
**Skin contact** : No specific data.  
**Ingestion** : No specific data.

**Numerical measures of toxicity**

**Acute toxicity estimates**  
 N/A

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Method	Species	Result	Exposure
potassium nitrate				
	OECD 203 Acute LC50 Fresh water	Fish	> 100 mg/l	96 h
	Acute EC50 Fresh water	Daphnia	490 mg/l	48 h
	Acute EC50 Marine water	Algae	> 1,700 mg/l	240 h

**Conclusion/Summary** : No known significant effects or critical hazards.

### Persistence/degradability

**Conclusion/Summary** : Readily biodegradable in plants and soils. The product does not show any bioaccumulation phenomena.

### Bioaccumulative potential

**Conclusion/Summary** : No known significant effects or critical hazards.

### Mobility in soil

**Soil/water partition coefficient (KOC)** : Not available.

**Mobility** : This product may move with surface or groundwater flows because its water solubility is: high




**Other adverse effects** : No known significant effects or critical hazards.

## Section 13. Disposal considerations

### Product

**Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	UN	IMDG	IATA
UN number	1486	1486	1486
UN proper shipping name	POTASSIUM NITRATE	POTASSIUM NITRATE	POTASSIUM NITRATE
Transport hazard class(es)	5.1 	5.1 	5.1 
Packing group	III	III	III
Environmental hazards	No.	No.	No.

### Additional information

#### IMDG

: Emergency schedules (EmS) F-A, S-Q

### 14.6 Special precautions for user

: Transport within user's premises: Ensure that persons transporting the product know what to do in the event of an accident or spillage.

### Transport in bulk according to IMO instruments

**Proper shipping name** : POTASSIUM NITRATE UN 1486  
**Remarks** : **Solid bulk cargoes**  
 Harmful to the marine environment with regard to MARPOL Annex V: No  
 Material is hazardous only in bulk according to the IMSBC: No  
 IMSBC shipping group: B

## Section 15. Regulatory information

**HSNO Approval Number** : HSR002570.  
**HSNO Group Standard** : Fertilisers (Oxidising [5.1.1])  
**HSNO Classification** : OXIDIZING SOLIDS - Category 3

**Country information** : **SCHEDULE 1 (CONDITIONS OF GROUP STANDARD) of the Fertilisers (Oxidising [5.1.1]) Group Standard 2006.**  
 Any location at which a substance is manufactured or stored in quantities that exceed those set out in the Standards' Tables 2 (except a location situated on a farm > hectares), 3,

and 4 must comply with the corresponding conditions as set out in the Standards' clauses 6, 7 and 8.

### Inventory list

**Philippines inventory (PICCS):** All components are listed or exempted.

**New Zealand Inventory of Chemicals (NZIoC):** All components are listed or exempted.

**Korea inventory:** All components are listed or exempted.

**Japan inventory (CSCL):** All components are listed or exempted.

**China inventory (IECSC):** All components are listed or exempted.

**Australia inventory (AIIC):** All components are listed or exempted.

**Taiwan Chemical Substances Inventory (TCSI):** All components are listed or exempted.

**United States inventory (TSCA 8b):** All components are active or exempted.

**EC INVENTORY (EINECS/ELINCS):** All components are listed or exempted.

**Canada:** All components are listed or exempted.

**Thailand:** All components are listed or exempted.

**Turkey:** All components are listed or exempted.

**Viet Nam:** All components are listed or exempted.

## Section 16. Other information

### Key to abbreviations

- : ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway
- : ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road
- : ATE = Acute Toxicity Estimate
- : BCF = Bioconcentration Factor
- : bw = Body weight
- : GHS = Globally Harmonized System of Classification and Labelling of Chemicals
- : IATA = International Air Transport Association
- : IBC = Intermediate Bulk Container
- : IMDG = International Maritime Dangerous Goods
- : LogPow = logarithm of the octanol/water partition coefficient
- : MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
- : RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
- : SUSMP - Standard Uniform Schedule of Medicine and Poisons
- : SGG = Segregation Group
- : UN = United Nations

### Key data sources

- : EU REACH ECHA/IUCLID5 CSR.
- : National Institute for Occupational Safety and Health, U.S. Dept. of Health, Education, and Welfare, Reports and Memoranda Registry of Toxic Effects of Chemical Substances.
- : Sphera Solutions Inc., 4777 Levy Street, St Laurent, Quebec HAR 2P9, Canada.HSNO Chemical Classification and Information database (CCID), New Zealand Inventory of Chemicals (NZIoC),

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Page:12/13

**Hazardous Substances (Safety Data Sheets) Notice 2017**

**Version** : 3.0  
**Prepared by** : Product Stewardship and Compliance (PSC).

|| Indicates information that has changed from previously issued version.

**Notice to reader**

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