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# SAFETY DATA SHEET

YaraTera KRISTA K PLUS

## Section 1. Identification

Product identifier : YaraTera 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 Australia Pty. Ltd.

### Address

Street : Level 1, 6 Holt Street  
Postal code : 2060  
City : McMahons Point  
Country : Australia

Telephone number : +61 2 9959 4266  
Fax no. : +61 2 9959 4050  
e-mail address of person responsible for this SDS : yaraasiapacific@yara.com  
Emergency telephone number (with hours of operation) : +61 2801 44558 (7/24)

### National advisory body/Poison Center

Name : WA Poisons Information Centre  
Telephone number : 131126  
Hours of operation : 24 hours, within Australia only

## Section 2. Hazard(s) identification

Classification and labelling have been performed following the guidelines and recommendation of GHS and the intended use.

Classification of the substance or mixture : OXIDIZING SOLIDS - Category 3

### GHS label elements

Hazard pictograms :



Signal word : WARNING

Hazard statements : H272 May intensify fire; oxidizer.

**Precautionary statements**

<b>Prevention</b>	:	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	:	P220-b	Store away from combustible materials and chemicals.
<b>Response</b>	:	P370	In case of fire:
	:	P378-b	Use flooding quantities of water to extinguish.

**Supplemental label elements** : Not applicable.

**Other hazards which do not result in classification** : Product forms slippery surface when combined with water.

**Section 3. Composition and ingredient information**

**Substance/mixture** : Substance

**CAS number/other identifiers**

**Other means of identification** : Potassium nitrate  
**CAS number** : 7757-79-1

<b>Ingredient name</b>	<b>CAS number</b>	<b>% (w/w)</b>
Potassium nitrate	7757-79-1	100
Potassium nitrate	7757-79-1	100

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

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**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**

<b>Eye contact</b>	:	Rinse with plenty of running water. Check for and remove any contact lenses. Get medical attention if irritation occurs.
<b>Inhalation</b>	:	If inhaled, remove to fresh air. Get medical attention if you feel unwell.
<b>Skin contact</b>	:	Wash with soap and water. Get medical attention if irritation develops.
<b>Ingestion</b>	:	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. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation.

See toxicological information (section 11)

## Section 5. Firefighting 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:  
carbon dioxide  
carbon monoxide  
nitrogen oxides  
Avoid breathing dusts, vapors or fumes from burning materials.  
In case of inhalation of decomposition products in a fire, symptoms may be delayed.
- Special protective actions for** : Promptly isolate the scene by removing all persons from the

<b>fire-fighters</b>		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.
<b>Special protective equipment for fire-fighters</b>	:	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.
<b>Remark</b>	:	None.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>For non-emergency personnel</b>	:	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. 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.
<b>For emergency responders</b>	:	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". 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".
<b>- Environmental precautions</b>	:	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 material for containment and cleaning up

<b>Small spill</b>	:	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.
<b>Large spill</b>	:	Move containers from spill area. 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. If contaminated with combustible material or reactive chemicals, use spark-proof tools and explosion-proof equipment.

## Section 7. Handling and storage

### Precautions for safe handling

#### **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. 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. 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 and 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.

- 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 emphasised 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. 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**

### Appearance

- Physical state** : Solid [Crystalline solid.]
- Color** : White.
- Odor** : Odorless.
- Odor threshold** : Not determined.
- pH** : 6 - 9 [Conc.: 50 g/l]
- Melting/freezing point** : 335 °C
- Boiling/condensation point** : Decomposition temperature: > 600 °C

	(> 600 °C)
<b>Sublimation temperature</b>	: Not determined.
<b>Flash point</b>	: Not applicable
<b>Evaporation rate</b>	: Not determined.
<b>Flammability (solid, gas)</b>	: Non-flammable.
<b>Lower and upper explosive (flammable) limits</b>	: <b>Lower:</b> Not determined. <b>Upper:</b> Not determined.
<b>Vapor pressure</b>	: Not determined.
<b>Density</b>	: 2.1 g/cm <sup>3</sup> @ 20 °C (20 °C)
<b>Relative density</b>	: Not determined.
<b>Solubility</b>	: Not determined.
<b>Solubility in water</b>	: 320 g/l @ 20 °C (20 °C)
<b>Partition coefficient: n-octanol/water</b>	: Not determined.
<b>Auto-ignition temperature</b>	: Not determined.
<b>Decomposition temperature</b>	: > 600 °C (> 600 °C)
<b>Viscosity</b>	: <b>Dynamic:</b> Not determined. <b>Kinematic:</b> Not determined.
<b>Explosive properties</b>	: None.
<b>Oxidizing properties</b>	: Oxidizer

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients. 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	Result	Species	Dose	Exposure	References
Potassium nitrate					
	LD50 Oral	Rat	> 2,000 mg/kg	Not applicable.	IUCLID 5
	LD50 Dermal	Rat	> 5,000 mg/kg	Not applicable.	
Potassium nitrate					
	LD50 Oral	Rat	> 2,000 mg/kg	Not applicable.	IUCLID 5
	LD50 Dermal	Rat	> 5,000 mg/kg	Not applicable.	

**Conclusion/Summary** : May be harmful if swallowed.

#### Irritation/Corrosion

Product / ingredient name	Result	Species	Score	Exposure	Observation	References
Potassium nitrate	Skin - Non-irritating. OECD 404	Rabbit	0		72 h	IUCLID 5
Potassium nitrate	Skin - Non-irritating. OECD 404	Rabbit	0		72 h	IUCLID 5

#### Conclusion/Summary

**Skin** : Non-irritating to the skin.

**Eyes** : Non-irritating to the eyes.

**Respiratory** : No data available for this end-point, hence this classification is not considered to be applicable.

#### Sensitization

#### Conclusion/Summary

**Skin** : Not sensitizing

**Respiratory** : Not sensitizing

#### Mutagenicity

**Conclusion/Summary** : No mutagenic effect.

#### Carcinogenicity



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

**Reproductive toxicity**

Product / ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure	References
Potassium nitrate	Negative	Negative	Negative	Rat	Oral: > 1500 mg/kg bw/day OECD 422	28 days	IUCLID 5
Potassium nitrate	Negative	Negative	Negative	Rat	Oral: > 1500 mg/kg bw/day OECD 422	28 days	IUCLID 5

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

**Teratogenicity**

**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 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 as well as chronic effects from short and long-term exposure****Short term exposure**

Potential immediate effects : Not available.  
 Potential delayed effects : Not available.

**Long term exposure**

Potential immediate effects : Not available.  
 Potential delayed effects : Not available.

**Potential chronic health effects**

Product / ingredient name	Result	Species	Dose	Exposure	References
Potassium nitrate	NOAEL Oral	Rat	> 1,500 mg/kg	28days	IUCLID 5
Potassium nitrate	NOAEL Oral	Rat	> 1,500 mg/kg	28days	IUCLID 5

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

**General** : No known significant effects or critical hazards.  
**Carcinogenicity** : No known significant effects or critical hazards.  
**Mutagenicity** : No known significant effects or critical hazards.  
**Teratogenicity** : No known significant effects or critical hazards.  
**Developmental effects** : No known significant effects or critical hazards.  
**Fertility 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**  
 Not available.

**Section 12. Ecological information****Toxicity**

Product / ingredient name	Result	Species	Exposure	References
Potassium nitrate				
	Acute LC50 1,378 mg/l Fresh water OECD 203	Fish	96 h	IUCLID 5
	Acute EC50 490 mg/l Fresh water	Daphnia	48 h	IUCLID 5
	Acute EC50 > 1,700 mg/l Fresh water	Algae	240 h	IUCLID 5

Potassium nitrate				
	Acute LC50 1,378 mg/l Fresh water OECD 203	Fish	96 h	IUCLID 5
	Acute EC50 490 mg/l Fresh water	Daphnia	48 h	IUCLID 5
	Acute EC50 > 1,700 mg/l Fresh water	Algae	240 h	IUCLID 5

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

#### **Persistence and degradability**

**Conclusion/Summary** : Readily biodegradable in plants and soils.

#### **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**


**Regulation: ADG**

14.1 UN number	1486
14.2 UN proper shipping name	
14.3 Transport hazard class(es)	5.1 
14.4 Packing group	III
14.5 Environmental hazards	No.
Additional information	

Regulation: ADR/RID	
14.1 UN number	1486
14.2 UN proper shipping name	POTASSIUM NITRATE
14.3 Transport hazard class(es)	5.1 
14.4 Packing group	III
14.5 Environmental hazards	No.
Additional information	
<u>Hazard identification number</u>	: 50
<u>Tunnel code</u>	: (E)

Regulation: IMDG	
14.1 UN number	1486
14.2 UN proper shipping name	POTASSIUM NITRATE
14.3 Transport hazard class(es)	5.1 
14.4 Packing group	III
14.5 Environmental hazards	No.
Additional information	
<u>Marine pollutant</u>	: Not available.
<u>Emergency schedules (EmS)</u>	: F-A, S-Q

Regulation: IATA	
14.1 UN number	1486
14.2 UN proper shipping name	POTASSIUM NITRATE
14.3 Transport hazard class(es)	5.1

	
<b>14.4 Packing group</b>	III
<b>14.5 Environmental hazards</b>	No.
<b>Additional information</b> <b><u>Marine pollutant</u></b> : No.	

**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.

**IMSBC**

**Bulk cargo shipping name** : POTASSIUM NITRATE UN 1486  
**Class** : Class 5.1: Oxidizing material.  
**Group** : B  
**Marpol V** : Non-HME

**Transport in bulk according to Annex II of MARPOL and the IBC Code** : Not applicable.

## Section 15. Regulatory information

**Standard for the Uniform Scheduling of Drugs and Poisons**

Not regulated.

**Model Work Health and Safety Regulations - Scheduled Substances**

No listed substance

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

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

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

**Canada inventory (DSL and NDSL)**: 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 listed or exempted.

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

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

## Section 16. Any other relevant information

**Key to abbreviations** : ADG = Australian Dangerous Goods  
 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)  
 NOHSC = National Occupational Health and Safety Commission  
 SUSMP = Standard Uniform Schedule of Medicine and Poisons  
 UN = United Nations

**Procedure used to derive the classification**

Classification	Justification
OXIDIZING SOLIDS - Category 3	Expert judgment.

**References**

: EU REACH 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.

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

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