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# SAFETY DATA SHEET

Krista K Plus

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Product name : Krista K Plus  
EC number : 231-818-8  
REACH Registration number : 01-2119488224-35  
CAS number : 7757-79-1  
Product code : PZ004K  
Product type : Solid (Crystalline solid. )

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses
Industrial distribution. Industrial USE to formulate chemical product mixtures. Professional formulation of fertiliser products. Professional USE as fertiliser at Farm - loading and spreading. Professional USE as fertiliser in Greenhouse. Professional USE as liquid fertiliser in open field (e.g. Fertigation). Professional USE as fertiliser - maintenance of equipment.

<b>Uses advised against</b>	: Other non-specified industry
<b>Reason</b>	: Due to lack of related experience or data, the supplier cannot approve this use.

### 1.3 Details of the supplier of the safety data sheet

Yara UK Limited

**Address**

Street : Harvest House, Europarc  
Postal code : DN37 9TZ  
City : Grimsby, North East Lincolnshire  
Country : United Kingdom  
Telephone number : +44 (0) 1472 889250  
Fax no. : +44 (0) 1472 889251  
e-mail address of person responsible for this SDS : yarauk.hesq@yara.com

### 1.4 Emergency telephone number

**National advisory body/Poison Center** : Not available.

**Supplier**

**Telephone number** : National Chemical Emergency Centre  
+44 (0) 1865 407333

**Hours of operation** : 24h

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

**Product definition** : Mono-constituent substance

### Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

**Classification** : Ox. Sol. 3, H272

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

### 2.2 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-b Store away from combustible materials and chemicals.

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

**EU Regulation (EC) No. 1907/2006 (REACH) Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles** : Not applicable.

### Special packaging requirements

**Containers to be fitted with child-resistant fastenings** : Not applicable.

**Tactile warning of danger** : Not applicable.

**2.3 Other hazards**

- Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII** : Not applicable.
- Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII** : Not applicable.
- Other hazards which do not result in classification** : Product forms slippery surface when combined with water.

**SECTION 3: Composition/information on ingredients**

**3.1 Substances** : Mono-constituent substance

Product / ingredient name	Identifiers	%	Classification	Type
			Regulation (EC) No. 1272/2008 [CLP]	
Potassium nitrate	RRN: 01-2119488224-35 EC: 231-818-8 CAS : 7757-79-1	100	Ox. Sol. 3, H272	[A]

Type

- [A] Constituent
- [B] Impurity
- [C] Stabilizing additive

See Section 16 for the full text of the H statements declared above.

There are no additional ingredients present which, within the current knowledge of the supplier, are classified and contribute to the classification of the substance and hence require reporting in this section.

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

**SECTION 4: First aid measures**

**4.1 Description of 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. Get medical attention if you feel unwell.
- 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.

- 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.

#### **4.2 Most important symptoms and effects, both 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.

#### **4.3 Indication of any immediate medical attention and special treatment needed**

- 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.

## **SECTION 5: Firefighting measures**

### **5.1 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.

### **5.2 Special hazards arising from the substance or mixture**

- Hazards from the substance or mixture** : 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** : 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.

### **5.3 Advice for firefighters**

- Special precautions 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. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.
- Additional information** : None.

## **SECTION 6: Accidental release measures**

### **6.1 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.
- 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".

### **6.2 - 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).

### **6.3 Methods and material 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. 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. If contaminated with combustible material or reactive chemicals, use spark-proof

tools and explosion-proof equipment.

- 6.4 Reference to other sections** :
- See Section 1 for emergency contact information.
  - See Section 8 for information on appropriate personal protective equipment.
  - See Section 13 for additional waste treatment information.

## SECTION 7: Handling and storage

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 7.1 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.
- 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.

### 7.2 Conditions for safe storage, including any incompatibilities

- Recommendations** :
- 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.

### Seveso Directive - Reporting thresholds

#### Danger criteria

Category	Notification and MAPP threshold	Safety report threshold
Potassium nitrate	1,250 t	5,000 t

### 7.3 Specific end use(s)

- Recommendations** :
- Not available.
- Industrial sector specific** :
- Not available.

solutions

## SECTION 8: Exposure controls/personal protection

The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

### 8.1 Control parameters

#### Occupational exposure limits

- Remark** : No exposure limit value known.
- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.  
Reference should be made to monitoring standards, such as the following:  
European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy)  
European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents)  
European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents)  
Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

#### DNELs/DMELs

Product / ingredient name	Type	Exposure	Value	Population	Effects
Potassium nitrate	DNEL	Long term Dermal	20.8 mg/kg bw/day	Workers	Systemic
Potassium nitrate	DNEL	Long term Inhalation	36.7 mg/m <sup>3</sup>	Workers	Systemic
Potassium nitrate	DNEL	Long term Dermal	12.5 mg/kg bw/day	Consumers	Systemic
Potassium nitrate	DNEL	Long term Inhalation	10.9 mg/m <sup>3</sup>	Consumers	Systemic
Potassium nitrate	DNEL	Long term Oral	12.5 mg/kg bw/day	Consumers	Systemic

#### PNECs

Product / ingredient name	Type	Compartment Detail	Value	Method Detail
Potassium nitrate	PNEC	Marine	0.045 mg/l	Assessment Factors
Potassium nitrate	PNEC	Intermittent release	4.5 mg/l	Assessment Factors
Potassium nitrate	PNEC	Sewage Treatment	18 mg/l	Assessment

Potassium nitrate	PNEC	Plant Fresh water	0.45 mg/l	Factors Assessment Factors
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## 8.2 Exposure controls

**Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.

### 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.

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

**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.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

**Physical state** : Solid (Crystalline solid.)  
**Color** : White.  
**Odor** : Odorless.  
**Odor threshold** : Not determined.  
**pH** : 6 - 9 [Conc. (% w/w): 50 g/l]



<b>Melting point/freezing point</b>	: 335 °C
<b>Initial boiling point and boiling range</b>	: Decomposition temperature: > 600 °C
<b>Flash point</b>	: Not applicable
<b>Evaporation rate</b>	: Not determined
<b>Flammability (solid, gas)</b>	: Non-flammable.
<b>Upper/lower flammability or explosive limits</b>	: <b>Lower:</b> Not determined <b>Upper:</b> Not determined
<b>Vapor pressure</b>	: Not determined
<b>Vapor density</b>	: Not determined
<b>Relative density</b>	: Not determined
<b>Bulk density</b>	: Not determined
<b>Density</b>	: 2.1 g/cm <sup>3</sup>
<b>Water solubility</b>	: 320 g/l @ 20 °C
<b>Partition coefficient: n-octanol/water</b>	: Not determined
<b>Auto-ignition temperature</b>	: Not determined
<b>Viscosity</b>	: <b>Dynamic:</b> Not determined <b>Kinematic:</b> Not determined
<b>Explosive properties</b>	: None.
<b>Oxidizing properties</b>	: Oxidizer

#### 9.2 Other information

No additional information.

## SECTION 10: Stability and reactivity

<b><u>10.1 Reactivity</u></b>	: No specific test data related to reactivity available for this product or its ingredients.
<b><u>10.2 Chemical stability</u></b>	: The product is stable.
<b><u>10.3 Possibility of hazardous reactions</u></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><u>10.4 Conditions to avoid</u></b>	: Avoid contamination by any source including metals, dust and organic materials.
<b><u>10.5 Incompatible materials</u></b>	: Reactive or incompatible with the following materials: alkalis combustible materials reducing materials organic materials acids
<b><u>10.6 Hazardous decomposition products</u></b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## SECTION 11: Toxicological information

### 11.1 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.	

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

#### Irritation/Corrosion

Product / ingredient name	Result	Species	Score	Exposure	Observation	References
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

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

**Teratogenicity**

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

**Information on the likely routes of exposure** : No known significant effects or critical hazards.

**Potential acute health effects**

**Inhalation** : Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.

**Ingestion** : No known significant effects or critical hazards.

**Skin contact** : No known significant effects or critical hazards.

**Eye contact** : No known significant effects or critical hazards.

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

**Inhalation** : No specific data.

**Ingestion** : No specific data.

**Skin contact** : No specific data.

**Eye contact** : No specific data.

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

**Short term exposure**

**Potential immediate effects** : No known significant effects or critical hazards.

**Potential delayed effects** : No known significant effects or critical hazards.

**Long term exposure**

**Potential immediate effects** : No known significant effects or critical hazards.

**Potential delayed effects** : No known significant effects or critical hazards.

**Potential chronic health effects**

Product / ingredient name	Result	Species	Dose	Exposure	References
Potassium nitrate	Sub-acute NOAEL Oral	Rat	> 1,500 mg/kg	28 days	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.

**Toxicokinetics**

- Absorption** : Rapidly absorbed.
- Distribution** :  
Enters the systemic circulation without passing through liver tissues.
- Metabolism** : Rapidly metabolized.
- Elimination** : The chemical and its metabolites are fully excreted and do not accumulate within the body.

**SECTION 12: Ecological information**

**12.1 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

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

**12.2 Persistence and degradability**

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

**12.3 Bioaccumulative potential**

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

**12.4 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

**12.5 Results of PBT and vPvB assessment**

- PBT** : Not applicable.
- vPvB** : Not applicable.

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

**SECTION 13: Disposal considerations**

The information in this section contains generic advice and guidance. The list of Identified Uses in Section 1 should be consulted for any available use-specific information provided in the Exposure Scenario(s).

**13.1 Waste treatment methods**

**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.
- Hazardous waste** : Yes.


**European waste catalogue (EWC)**

Waste code	Waste designation
06 10 02*	wastes containing dangerous substances


**Packaging**


- Methods of disposal** : The generation of waste should be avoided or minimized wherever possible. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. Empty the bag by shaking to remove as much as possible of its contents. Empty bags may be disposed of as non-hazardous material or returned for recycling.
- Special precautions** : 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**

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

**Tunnel code** : (E)

Regulation: ADN	
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	
<b>Danger code</b>	: Not applicable.

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	
<b>Marine pollutant</b>	: No.
<b>Emergency schedules (EmS)</b>	: 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 
14.4 Packing group	III
14.5 Environmental hazards	No.
Additional information	
<b>Marine pollutant</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.

**14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**  
Not applicable.

**14.8 IMSBC**

**Bulk cargo shipping name** : POTASSIUM NITRATE UN 1486  
**Class** : Class 5.1: Oxidizing material.  
**Group** : B

Marpol V : Non-HME

## SECTION 15: Regulatory information

### 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU Regulation (EC) No. 1907/2006 (REACH)

##### Annex XIV - List of substances subject to authorization

Annex XIV: None of the components are listed.

Substances of very high concern: None of the components are listed.

EU Regulation (EC) No. 1907/2006 (REACH) Annex XVII : Not applicable.

##### - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

#### Other EU regulations

Europe inventory : All components are listed or exempted.

#### Seveso Directive

This product is controlled under the Seveso Directive.

##### Danger criteria

Category
Potassium nitrate

#### National regulations

**Notes** : To our knowledge no other country or state specific regulations are applicable.

15.2 Chemical Safety Assessment : This product contains substances for which Chemical Safety Assessments are still required.

## SECTION 16: Other information

**Abbreviations and acronyms** :

- ATE = Acute Toxicity Estimate
- CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
- DNEL = Derived No Effect Level
- DMEL = Derived Minimal Effect Level
- EUH statement = CLP-specific Hazard statement
- PNEC = Predicted No Effect Concentration
- RRN = REACH Registration Number
- PBT = Persistent, Bioaccumulative and Toxic
- vPvB = Very Persistent and Very Bioaccumulative
- bw = Body weight

**Key literature references and sources for data** : 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.  
 IHS, 4777 Levy Street, St Laurent, Quebec HAR 2P9, Canada.  
 Regulation (EC) No 1272/2008 Annex VI.

**Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]**

Classification	Justification
Ox. Sol. 3, H272	Expert judgment

**Full text of abbreviated H statements** : H272 May intensify fire; oxidizer.

**Full text of classifications [CLP/GHS]** : Ox. Sol. 3, H272: OXIDIZING SOLIDS - Category 3

**Revision comments** : The safety data sheet has been revised according to Commission Regulation (EU) 2015/830.

**Date of printing** : 19.01.2017

**Date of issue/ Date of revision** : 16.01.2017

**Date of previous issue** : 12.01.2017

**Version** : 4.0

**Prepared by** : Yara Chemical Compliance (YCC).

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

**Notice to reader**

To the best of our knowledge, the information provided in this Safety Data Sheet is accurate as at the date of its issue. The information it contains is being given for safety guidance purposes and relates only to the specific material and uses described in it. This information does not necessarily apply to that material when combined with other material(s) or when used otherwise than as described herein, since all materials may represent unknown hazards and should be used with caution. Final determination of the suitability of any material is the sole responsibility of the user.





**Annex to the extended Safety Data Sheet (eSDS) -  
Exposure Scenario:**

**Identification of the substance or mixture**

**Product definition** : Mono-constituent substance

**Product name** : Krista K Plus

**Exposure Scenario information** : Not yet complete.



**Annex to the extended Safety Data Sheet (eSDS) -  
Exposure Scenario:**

**Section 1 – Title**

**Short title of the exposure scenario** : Yara - Potassium nitrate - Professional

**Identified use name** : Professional formulation of fertiliser products.  
Professional USE as fertiliser at Farm - loading and spreading.  
Professional USE as fertiliser in Greenhouse.  
Professional USE as liquid fertiliser in open field (e.g. Fertigation).  
Professional USE as fertiliser - maintenance of equipment.  
Industrial distribution.  
Industrial USE to formulate fertilisers product mixtures.

**Substance supplied to that use in form of** : As such

**List of use descriptors**

**Process Category** : PROC02, PROC05, PROC08a, PROC08b, PROC09, PROC11, PROC13, PROC19, PROC03, PROC04  
**Environmental Release Category** : ERC08b, ERC08e, ERC02  
**Market sector by type of chemical product** : PC12  
**Sector of end use** : SU01, SU10, SU 0: Other: NACE C20.1.5  
**Subsequent service life relevant for that use** : No.

<p><b>Number of the ES</b></p> <p><b>Processes and activities covered by the exposure scenario</b></p>	<p>: YESWKN003</p> <p>: Agricultural industry Professional applications Formulation of the substance and its mixtures in batch or continuous operations within closed or contained systems, including incidental exposures during storage, materials transfers, mixing, maintenance, sampling and associated laboratory activities. Formulation, packing and re-packing of the substance and its mixtures in batch or continuous operations, including storage, materials transfers, mixing, tableting, compression, pelletisation, extrusion, large and small scale packing, sampling, maintenance and associated laboratory activities. Mixing of solids and liquids in batch formulation of coatings, cleaners, plastic compounds, dyestuffs etc. Use as an agrochemical excipient for application by manual or machine spraying, smokes and fogging; including equipment clean-downs and disposal. Use of the substance within laboratory settings within enclosed or contained systems, including incidental exposures during material transfers and equipment cleaning.</p>
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**Section 2 – Exposure controls**

**Contributing exposure scenario controlling environmental exposure for: All**

Not applicable., Non-dangerous substance, (, Environmental effects, ), This product is not classified according to EU legislation., No exposure assessment presented for the environment.

**Contributing exposure scenario controlling worker exposure for: All**

<b>Product Characteristics</b>	:	Inorganic salt.
<b>Concentration of substance in mixture or article</b>	:	Covers percentage substance in the product up to 100% (unless stated differently).
<b>Physical state</b>	:	Solid. Liquid.
<b>Dust</b>	:	Solid, low dustiness
<b>Frequency and duration of use</b>	:	Covers daily exposures up to 8 hours (unless stated differently), Covers frequency up to: daily, weekly, monthly, yearly use.
<b>Human factors not influenced by risk management</b>	:	Not applicable.
<b>Area of use:</b>	:	Indoor/Outdoor use
<b>Technical conditions and measures at process level (source) to prevent release</b>	:	Observe the usage/storage instructions.
<b>Technical conditions and measures to control dispersion from source towards the worker</b>	:	Control any potential exposure using measures such as contained or enclosed systems, properly designed and maintained facilities and a good standard of general ventilation. Drain down systems and transfer lines prior to breaking containment. Drain down and flush equipment where possible prior to maintenance. Where there is potential for exposure: Ensure relevant staff are informed of the nature of exposure and aware of basic actions to minimise exposures; ensure suitable personal protective equipment is available; clear up spills and dispose of waste in accordance with regulatory requirements; monitor effectiveness of control measures; consider the need for health surveillance; identify and implement corrective actions., Not applicable.
<b>Engineering controls</b>	:	Minimise exposure by partial enclosure of the operation or equipment and provide extract ventilation at openings., Only allow access to authorised persons.
<b>Ventilation control measures</b>	:	Only use product in a well-ventilated area., Provide a good standard of general ventilation (not less than 3 to 5 air changes per hour)., Ensure the ventilation system is regularly maintained and tested.
<b>Product substance-related measures</b>	:	Store in a dry place., Store in a closed container., Store away from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10)., Store in accordance with all local, regional, national and international regulations.

**Organisational measures to prevent/limit releases, dispersion and exposure** : Only allow access to authorised staff., Extraction:, Use appropriate containment to avoid environmental contamination., If necessary:, Use complete process isolation technology., Automate activity where possible., Ensure operatives are trained to minimise exposures., No action shall be taken involving any personal risk or without suitable training., Ensure control measures are regularly inspected and maintained.

**Conditions and measures related to personal protection, hygiene and health evaluation**

**Personal protection** : Avoid contact with skin and eyes., Avoid breathing dust or mist., Wear eye/face protection., Wear suitable coveralls to prevent exposure to the skin., See Section 8 of the safety data sheet (personal protective equipment).

**Respiratory protection** : If ventilation is inadequate, use respirator that will protect against dust/mist., See Section 8 for information on appropriate personal protective equipment.

**Section 3 – Exposure estimation and reference to its source**

**Exposure estimation and reference to its source - Environment: All**

**Exposure assessment (environment):** : Qualitative approach used to conclude safe use.

**Exposure estimation** : Exposures are low and do not exceed limit values.

**Exposure estimation and reference to its source - Workers:**

**Exposure assessment (human):** : Contributing Scenario : **All**  
Qualitative approach used to conclude safe use.

**Exposure estimation** : Predicted exposures are not expected to exceed the applicable exposure limits (given in section 8 of the SDS) when the operational conditions/risk management measures given in section 2 are implemented.

**Section 4 – Guidance to Downstream User to evaluate if he works inside the boundaries set by the ES**

**Environment** : The product is not expected to harm the environment when used properly according to directions.

**Health** : Refer to special instructions/safety data sheet.

**Abbreviations and acronyms**

**Process Category** : PROC02 - Use in closed, continuous process with occasional controlled exposure  
PROC05 - Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact)  
PROC08a - Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities  
PROC08b - Transfer of substance or preparation

	(charging/discharging) from/to vessels/large containers at dedicated facilities PROC09 - Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC11 - Spraying outside industrial settings and/or applications PROC13 - Treatment of articles by dipping and pouring PROC19 - Hand-mixing with intimate contact and only PPE available PROC03 - Use in closed batch process (synthesis or formulation) PROC04 - Use in batch and other process (synthesis) where opportunity for exposure arises
<b>Environmental Release Category</b>	: ERC08b - Wide dispersive indoor use of reactive substances in open systems ERC08e - Wide dispersive outdoor use of reactive substances in open systems ERC02 - Formulation of preparations
<b>Market sector by type of chemical product</b>	: PC12 - Fertilizers
<b>Article category related to subsequent service life</b>	: - Not applicable.
<b>Sector of end use</b>	: SU01 - Agriculture, forestry, fishery SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys) SU 0: Other: NACE C20.1.5 - Manufacture of fertilizers and nitrogen compounds