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.)
Other means of identification	:	Potassium nitrate

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

Identified uses
Industrial distribution of substance. Industrial USE of substance to formulate fertilisers product mixtures. Professional formulation of fertiliser products. Professional USE of substance as fertiliser at Farm - loading and spreading (includes soil conditioning). Professional USE of substance as fertiliser in Greenhouse (e.g. Fertigation, includes pH control of fertiliser solution with acid). Professional USE of substance as liquid fertiliser in open field (e.g. Fertigation). Professional USE of substance as fertiliser - maintenance of equipment. Consumer USE of fertilisers.

Uses advised against	:	Other non-specified industry
Reason	:	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	:	Not available.

Center

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

Classification according to Directive 67/548/EEC [DSD]

Classification : O, R8

See Section 16 for the full text of the R phrases or 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 : May intensify fire; oxidizer.

Precautionary statements

Prevention : Keep away from heat, sparks and open flames. - No smoking. Keep away from combustible materials. Wear eye protection.

Response :

In case of fire: Use flooding quantities of water for extinction.

Storage : Not applicable.

Disposal : Not applicable.

Supplemental label elements : 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

Substance/mixture : Mono-constituent substance

Product / ingredient name	Identifiers	%	Classification		Type
			67/548/EEC	Regulation (EC) No. 1272/2008 [CLP]	
Potassium nitrate	RRN: 01-2119488224-35 EC: 231-818-8 CAS : 7757-79-1	100	O; R8	Ox. Sol. 3 H272	

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.

Type
[1] Substance classified with a health or environmental hazard
[2] Substance with a workplace exposure limit
[3] PBT-substance
[4] vPvB-substance
See Section 16 for the full text of the R phrases or H statements declared above.

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

SECTION 4: First aid measures

4.1 Description of first aid measures

Eye contact : In case of contact with eyes, rinse immediately with plenty of water. Get medical attention if irritation occurs.

Inhalation : Avoid breathing dust. If inhaled, remove to fresh air.

Skin contact : Avoid prolonged or repeated contact with skin. After handling, always wash hands thoroughly with soap and water. Get medical attention if irritation develops.

Ingestion : If large quantities of this material are swallowed, call a physician immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

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 : May cause eye irritation.

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

Skin contact : May cause skin irritation.

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 : 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 : 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 specialised 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 materials for containment and cleaning up

Small spill	:	Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Do not mix with sawdust or other combustible material. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Material free from contamination can be used for its original purpose.
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. Do not mix with sawdust or other combustible material. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Material free from contamination can be used for its original purpose. Note: see section 1 for emergency contact information and section 13 for waste disposal.
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. Product forms slippery surface when combined with water.
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. Keep away from acids or bases.

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

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).

8.1 Control parameters

Occupational exposure limits
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 European Standard EN 689 for methods for the assessment of exposure by inhalation to chemical agents and national guidance documents for methods for the determination of hazardous substances.

Derived effect levels

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/m³	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/m³	Consumers	Systemic
Potassium nitrate	DNEL	Long term Oral	12.5 mg/kg bw/day	Consumers	Systemic

Predicted effect concentrations

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 Plant	18 mg/l	Assessment Factors
Potassium nitrate	PNEC	Fresh water	0.45 mg/l	Assessment Factors

8.2 Exposure controls

Appropriate engineering controls : No special ventilation requirements. Good general ventilation should be sufficient to control worker exposure to airborne contaminants. If this product contains ingredients with exposure limits, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure below any recommended or statutory limits.

Individual protection measures

Hygiene measures : 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. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. 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. Recommended: safety glasses with side-shields CEN: EN166

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. > 8 h hours (breakthrough time) : natural rubber (latex), nitrile rubber

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

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.: 50 g/l]
Melting point/freezing point	:	335 °C
Initial boiling point and boiling range	:	> 600 °C
Flash point	:	Not applicable
Evaporation rate	:	Not determined.
Flammability (solid, gas)	:	Not determined.
Burning time	:	Not determined.
Burning rate	:	Not determined.
Upper/lower flammability or explosive limits	:	Lower: Not determined. Upper: Not determined.
Vapor pressure	:	Not determined.
Vapor density	:	Not determined.
Relative density	:	Not determined.
Density	:	2.5 g/cm3
Quantitative Solubility in Water	:	320 g/l 20 °C
Partition coefficient: n-octanol/water	:	Not determined.
Auto-ignition temperature	:	Not determined.
Viscosity	:	Dynamic: Not determined. Kinematic: Not determined.
Explosive properties	:	None.
Oxidizing properties	:	Not determined.

9.2 Other information

No additional information.

SECTION 10: Stability and reactivity

10.1 Reactivity	:	No specific test data related to reactivity available for this product or its ingredients.
10.2 Chemical stability	:	The product is stable.

10.3 Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid : No specific data.
Remark : Avoid contact with combustible materials.

10.5 Incompatible materials : Reactive or incompatible with the following materials:
acids
alkalis
combustible materials
reducing materials
organic materials

10.6 Hazardous decomposition products : 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	-	IUCLID 5
	LC50 Inhalation	Rat	> 0.527 mg/l	4 h	IUCLID 5
	LD50 Dermal	Rat	> 5,000 mg/kg	-	IUCLID 5

Conclusion/Summary : Not considered to be toxic to humans.

Irritation/Corrosion

Product / ingredient name	Result	Species	Score	Exposure	Observation	References
Potassium nitrate	Eyes - Moderate irritant	Rabbit			-	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.

Teratogenicity

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	28 days	IUCLID 5

Conclusion/Summary : No known significant effects or critical hazards.
Information on the likely routes of exposure : Routes of entry anticipated:, Oral

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 : May cause skin irritation.

Eye contact : May cause eye irritation.

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 : 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

Product / ingredient name	Result	Species	Dose	Exposure	References
Potassium nitrate	Sub-acute NOAEL Oral	Rat	> 1500 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.

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
Nitric acid potassium salt				
	Acute LC50 1,378 mg/l Fresh water	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	Aquatic plants	240 h	IUCLID 5

Conclusion/Summary : The product does not show any bioaccumulation phenomena. The product is not expected to harm the environment when used properly according to directions.

12.2 Persistence and degradability

Conclusion/Summary : Readily biodegradable in plants and soils.

12.3 Bioaccumulative potential

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 320 g/l

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. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. 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.

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

		ADR/RID	ADN/ADNR	IMDG	IATA
14.1 UN number		1486	1486	1486	1486
14.2 UN proper shipping name		POTASSIUM NITRATE	POTASSIUM NITRATE	POTASSIUM NITRATE	Potassium nitrate
14.3 Transport hazard class(es)		5.1, 	5.1, 	5.1, 	5.1, 
14.4 Packing group		III	III	III	III
14.5. Environmental hazards		No.	No.	No.	
14.6 Additional information	Hazard identification number / HI/Kemler number	50			
	Limited quantity	LQ12			
	Special provisions				
	Tunnel code	(E)			
	Emergency schedules			F-A S-Q	
	Marine pollutant	No.	No.	No.	
	Passenger and Cargo Aircraft				Quantity limitation: 25.00 KG Packaging instructions: 559

	Cargo Aircraft Only				Quantity limitation: 100.00 KG Packaging instructions: 563
	Remarks				

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

14.8 IMSBC

Proper shipping name	:	POTASSIUM NITRATE UN 1486
Class	:	Class 5.1: Oxidizing material.
Group	:	B

SECTION 15: Regulatory information

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

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	:	Not applicable.

Other EU regulations

Europe inventory	:	All components are listed or exempted.
Integrated pollution prevention and control list (IPPC) - Air	:	Not listed
Integrated pollution prevention and control list (IPPC) - Water	:	Not listed
Hazardous incident ordinance Remark	:	Not applicable.

National regulations

15.2 Chemical Safety Assessment	:	Complete.

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
EUH statement = CLP-specific Hazard statement
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
bw = Body weight

Key literature references and sources for data : EU REACH IUCLID5 CSR
Regulation (EC) No 1272/2008 Annex VI
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
Atrion International Inc. 4777 Levy Street, St Laurent, Quebec HAR 2P9, Canada

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 OXIDIZING SOLIDS Category 3
Full text of abbreviated R phrases : R8- Contact with combustible material may cause fire.
Full text of classifications [DSD/DPD] : O - Oxidizing
Date of printing : 01.08.2012
Date of issue/ Date of revision : 06.07.2011
Date of previous issue : 00.00.0000
Version : 1.
Prepared by : Yara Product Classifications & Regulations.

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

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

Section 1 — Title

Short title of the exposure scenario	:	Yara - Potassium nitrate - Professional
List of use descriptors		
Identified use name	:	Professional formulation of fertiliser products. Professional USE of substance as fertiliser at Farm - loading and spreading (includes soil conditioning). Professional USE of substance as fertiliser in Greenhouse (e.g. Fertigation, includes pH control of fertiliser solution with acid). Professional USE of substance as liquid fertiliser in open field (e.g. Fertigation). Professional USE of substance as fertiliser - maintenance of equipment.
Process Category	:	PROC02, PROC05, PROC8a, PROC08b, PROC09, PROC11, PROC13, PROC19
Substance supplied to that use in form of	:	As such
Sector of end use	:	SU01, SU10
Subsequent service life relevant for that use	:	No.
Environmental Release Category	:	ERC08b, ERC08e
Market sector by type of chemical product	:	PC12
Article category related to subsequent service life	:	Not applicable.
Environmental contributing scenarios	:	**All -** ERC08b, ERC08e
Health Contributing scenarios	:	**All -** PROC02, PROC05, PROC8a, PROC08b, PROC09, PROC11, PROC13, PROC15, PROC19,

Number of the ES	:	YESWKN003
Processes and activities covered by the exposure scenario	:	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, tabletting, 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.

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

Product Characteristics	:	Inorganic salt.
Concentration of substance in mixture or article	:	Covers percentage substance in the product up to 100% (unless stated differently).
Physical state	:	Solid., Liquid.
Dust	:	Solid, low dustiness.
Frequency and duration of use	:	Covers daily exposures up to 8 hours (unless stated differently)., Covers frequency up to: daily, weekly, monthly, yearly use.
Human factors not influenced by risk management	:	Contributing Scenario: Not applicable.
Area of use:	:	Indoor/Outdoor use.
Technical conditions and measures at process level (source) to prevent release	:	Observe the usage/storage instructions.
Technical conditions and measures to control dispersion from source towards the worker	:	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.
Engineering controls	:	Minimise exposure by partial enclosure of the operation or

		equipment and provide extract ventilation at openings., Only allow access to authorised persons.
Ventilation control measures	:	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.
Product substance-related measures	:	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 exposure., 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: All

Exposure assessment (human):	:	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) PROC8a - 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 - Non industrial spraying PROC13 - Treatment of articles by dipping and pouring PROC19 - Hand-mixing with intimate contact and only PPE available
Sector of end use	:	SU01 - Agriculture, forestry, fishery SU10 - Formulation [mixing] of preparations and/or re-packaging (excluding alloys)
Environmental Release Category	:	ERC08b - Wide dispersive indoor use of reactive substances in open systems ERC08e - Wide dispersive outdoor use of reactive substances in open systems
Market sector by type of chemical product	:	PC12 - Fertilizers