



SAFETY DATA SHEET

PK FERTILIZER

CODE: DS-074-I
VERSION: 5
DATE: 24-10-2017
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Section 1 – IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND COMPANY

1.1 Product identifier

Trade name	PK Fertilizer EC FERTILIZER
Chemical name	PK, Foskamónio, Amicote y Nergetic
Chemical Formula	-
INDEX Number EU (Annex 1)	Not applicable
CAS Number	Not applicable
EC Number	Not applicable
REACH Registration Number	Not applicable

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

Identified Uses: Fertilizer and intermediate in the blending of fertilizers

Uses advised against: Others not specified.

1.3 Details of the supplier of the safety data sheet

Manufacturer: ADP – Fertilizantes, S.A.

Address: Estrada Nacional nº 10
2615-907 ALVERCA
PORTUGAL

☎ (00351) 210 300 400
Fax: (00351) 210 300 500
e-mail: msds@adp-fertilizantes.pt

1.4 Emergency telephone numbers

SOPAC- Sociedade Produtora de Adubos Compostos S.A.
Emergency National Number
INEM (National Emergency Centre)

☎ (00351) 265030496
☎ 112
☎ (00351) 808 250 143

Section 2 - HAZARDS IDENTIFICATION

2.1 Classification of the mixture

Hazard determining components of classification:

- Superphosphate (SSP)
- Superphosphate concentrated (TSP)

2.1.1 Classification in accordance with Regulation (EC) 1272/2008 (CLP)

- Serious eye damage, Category 1, H318 (Eye Dam.1)

2.1.2 Classification in accordance with Directive 67/548/EEC (DSD)

This substance is not classified as dangerous according to annex I of Directive 67/548/EEC.

In accordance with Directive 67/548/EEC criteria, by self- based on the performed CSA (chemistry safety assessment), the substance has to be classified as:

- Xi, Irritant

With the following risk phrase:

- R41, Risk of serious damage to eyes

2.2 Label elements in accordance with Regulation (EC) no. 1272/2008 (CLP)



DANGER

H318 **Causes serious eye damage (Cat.1)**

- P280 - Wear eye protection.
P305+ P351+ P338+ - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician
P310

2.3 PBT/vPvB criteria

According to Annex XIII of Regulation (EC) No 1907/2006, no PBT and vPvB assessment has been conducted since the substance is inorganic.

2.4 Other hazards

None known.

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Section 3 - COMPOSITION/INFORMATION ON INGREDIENTS

IUPAC Name	CAS N°	EC N°	REACH Registration N°	% (w/w)	Classification
Superphosphate (SSP)	8011-76-5	232-379-5	01-2119488967-11-0000	7-70	CLP: H318 DSD: Not classified
Superphosphate, conc. (TSP)	65996-95-4	266-030-3	01-2119493057-33-0005	30-65	CLP: H318 DSD: Not classified
Potassium Chloride (KCl)	7447-40-7	231-211-8	-	16-51	CLP: Not classified DSD: Not classified

According to the Chemical Safety Report and Directive 67/548/EEC's criteria, SSP and TSP can be included in the following dangerous category: Xi -Irritant, with the risk phrase R41. See section 16 for the complete texts regarding the H-code of the Hazard statements and the mentioned R-phrase.

Secondary nutrients of mineral origin which are not covered by the REACH Regulation and which do not affect the hazardousness of the final product may be added.

Section 4 - FIRST-AID MEASURES

4.1 Description of first aid measures

Eye contact: Immediately wash eyes with plenty of running water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Remove contact lenses, if present and easy to do. Seek medical assistance immediately.

Skin contact: Remove contaminated clothing and shoes and wash affected skin area with plenty of water and soap for at least 15 minutes thoroughly. Seek medical advice if irritation develops and persists.

Ingestion: Seek medical advice if the victim feels unwell. Wash out mouth with water and give plenty of water to drink. Never give anything by mouth to an unconscious person. Do not induce vomiting.

Inhalation: Remove the victim immediately from the dust exposure area into an area of fresh air, in case of adverse effects (eg. dizziness, drowsiness or respiratory irritation). In case of respiratory arrest, give artificial respiration (do not perform mouth to mouth) or in case of difficulty in breathing give oxygen (if a qualified professional is present). Seek medical assistance in case of indisposition or if having inhaled a large quantity of dust.

4.2 Most important symptoms and effects

Acute effects: Eye irritation.

Delayed effects: None known.

4.3 Indication of any immediate medical attention and special treatment needed

Inhalation of fire and thermal decomposition gases, containing phosphorous and sulphur oxides, can cause irritation and corrosive effects on the respiratory system. Some lung effects may be delayed.

Section 5 - FIRE-FIGHTING MEASURES

5.1 Extinguishing media

The product is not flammable.

Suitable: On the surrounding area, fire extinguishing media that are adequate to the type of fire can be used.

Not suitable: None known.

5.2 Special hazards arising from the substance/mixture

During heating or in case of fire, may release poisonous gases: phosphorus oxides, sulphur oxides and fluorine based pyrolysis products.

5.3 Advice for firefighters

In the event of fire, wear a self-contained breathing apparatus (SCBA) with a full face-piece operated and a chemical protective suit.

Section 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid creating dusty conditions and prevent wind dispersal. Ensure adequate ventilation. Avoid contact with eyes, skin, and clothing. Use suitable protective equipment.

6.2 Environmental precautions

Prevent the material from entering surface water or sanitary sewer system. Do not discharge directly to a water source. Contact the competent authorities, if accidental spillage or washings enter drains or watercourses.

6.3 Methods and material for containment and cleaning up

Any spillage of the fertilizer must be promptly collected and placed into suitable and labelled containers for a safe recovery or disposal.

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6.4 Reference to other sections

See section 8 for personal protective equipment and section 13 for waste disposal.

Section 7 - HANDLING AND STORAGE

7.1 Precautions for safe handling

Technical measures and precautions: Avoid contact with eyes, skin and clothing. Avoid creating dusty conditions and prevent wind dispersal. Keep away from moisture. Avoid contamination by combustible (e.g. diesel oil, grease, etc.) and /or other incompatible materials. Wear gloves when handling the product for long periods of time. Clean carefully all the equipment before maintenance and repair.

General occupation hygiene: Do not eat, drink or smoke in the work area. Wash hands after use. Remove contaminated clothes and protection equipment after handling of the product.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions: Keep the substance in the original container. Keep container tightly closed in a cool, dry and well ventilated place away from sources of heat, out of direct sunlight, humidity and water. Keep away from alkalis (caustic solutions) and urea. Ensure that the good practices of planning and cleaning in the storage areas are respected. Do not allow smoking, spark, making fire or flames nor the use of naked lamps in the storage area. Restrict the height of the pile or stack according to local or national regulation.

Incompatible products: Alkalis, urea

7.3 Specific end uses

Not mentioned.

Section 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Regulated occupational exposure limit values:

No established limit.
 General non-hazardous dust exposure limit TLV-TWA:
 10 mg/m³ (inhalable particles).

Recommended occupational and consumer exposure limit values (following from the performed CSA):
For SSP and TSP

Exposure pattern	Derived No Effect Level (DNEL)	
	Workers	General population
Oral ¹	Not applicable	2.1 mg/kg bw/day
Dermal ¹	17.4 mg/kg bw/day	10.4 mg/kg bw/day
Inhalation ¹	3.1 mg/m ³	0.9 mg/m ³

¹: As an acute toxicity hazard leading to Classification and Labelling of the substance has not been identified, the long-term DNEL is considered sufficient to ensure that effects from acute exposure to the substance do not occur (in accordance with ECHA Guidance on information requirements and chemical safety assessment: Chapter R.8: Characterisation of dose [concentration]-response for human health, May 2008 and Part B: Hazard Assessment, Draft new chapter B.8 Scope of Exposure Assessment, March 2010).

Limit values for environment exposure:
For SSP and TSP

Predicted No Effect Concentration (PNEC)	
Fresh water	1.7 mg/l
Marine water	0.17 mg/l
Intermittent use/release	17 mg/l
Air	Not available
Soil	Not available
Sewage treatment plant	10 mg/l
Sediments	Not available
Oral	Not available

8.2 Exposure controls

Appropriate engineering controls: Avoid high dust concentration. Use adequate ventilation whenever necessary. In addition, an eyewash facility and a safety shower for facilities storing or using this material is good industrial practice.

Individual protection measures, such as personal protective equipment

Respiratory protection: The use of dust masks with appropriate filter (EN 143, 149, filters P2, P3) is recommended when the concentration of dust is high and/or the ventilation is inadequate.

Hand protection: Wear Chemical-resistant gloves, when handling the product for long periods of time.

Eye protection: Wear protection goggles (EN166) or a full face shield (EN402).

Skin and body protection: Working clothes.

Hygiene measures: Do not eat, drink or smoke when handling the product. Wash hands, forearms and face after handling the product, before going to the bathroom and at the end of the work period. Always follow the good practices of hygiene.

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Environmental exposure controls: Treat the wash water according to local and national regulations. Provide the contention and confinement of the product.

Section 9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance, 20°C e 1013 hPa	Grey or brownish colour. Granulated.
Odour	Odourless
pH (10% aqueous solution)	>2.5
Melting point	No melting point, decomposes >100°C (based on main constituents)
Boiling point	No boiling point, decomposes (based on main constituents)
Flash Point	Not relevant, as the substance is an inorganic solid
Flammability	Not flammable (based on molecular structure)
Vapour pressure	Not available
Solubility in water	1-7 g/l at 20°C (based on main constituents from peer-reviewed handbook)
Partition coefficient n-octanol/water	Not relevant as the substance is inorganic
Auto ignition temperature	No auto-ignition
Viscosity	Not applicable to solids
Explosive properties	Non explosive (based on molecular structure)
Oxidizing properties	Non oxidising (based on molecular structure and experience in handling)

9.2 Other information

Granulometry	>90% within 2-5 mm
Bulk density (powder and granulated)	1100-1300 kg/m ³
Specific conductivity	No data
Surface tension	Not surface active (based on molecular structure)

Section 10 - STABILITY AND REACTIVITY

10.1 Reactivity

Stable under recommended storage and handling conditions (see section 7, handling and storage).

10.2 Chemical stability

Stable under recommended storage and handling conditions (see section 7, handling and storage).

10.3 Possibility of hazardous reactions

When strongly heated decomposes releasing toxic vapours.

10.4 Conditions to avoid

Heating and contact with alkalis.

10.5 Incompatible materials

Alkalis and urea.

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Formation of toxic gases is possible during heating or in case of fire: e.g. phosphorous oxides, sulphur oxides and danger of toxic fluorine based pyrolysis products.

Section 11 - TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

Acute oral toxicity (rat):	LD ₅₀ : >2000 mg/kg bw (OECD 425 with diammonium hydrogen-orthophosphate; EPA with calcium bis(dihydrogenortho- phosphate))
Acute dermal toxicity (rat and rabbit):	LD ₅₀ : >2000 mg/kg bw (OECD 402 with diammonium hydrogen-orthophosphate; EPA with calcium bis(dihydrogenortho- phosphate))
Acute inhalation toxicity(rat):	LC ₅₀ : >5 mg/l (OECD 403, with diammonium hydrogenortho- phosphate)

Local effects

Skin irritation (rabbit):	Not irritating (OECD 404 with ammonium dihydrogenortho- phosphate)
Eye irritation(rabbit):	Irritating (OECD 405, EC B.5)
Skin sensitization (mouse):	Not sensitizing (OECD 429, EC B.42 with diammonium hydrogen-orthophosphate)

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Other

Sub-acute toxicity (rat):	Oral 28-day NOAEL: 250 mg/kg bw/day (OECD 422, with TSP)
Mutagenicity:	Negative (Salmonella typhimurium and E. Coli, OECD 471, with TSP) Negative (Human lymphocytes, OECD 473) Negative (mouse lymphoma cells, OECD 476, with ammonium dihydrogenorthophosphate)
Reproductive toxicity (rat):	Oral NOAEL reproductive/developing: 750 mg/kg bw/day (OECD 422, with TSP)
Carcinogenicity:	No data

Section 12 - ECOLOGICAL INFORMATION**12.1 Toxicity**

Fish (short-term):	96-h LC ₅₀ : >85.9 mg/l (OECD 203, ammonium dihydrogenorthophosphate)
Fish (long-term):	No data
Daphnia magna (short-term):	72-h EC ₅₀ : 1790 mg/l (no guideline followed)
Daphnia magna (long-term):	No data
Algae:	72-h EC ₅₀ : >87.6 mg/l (OECD 201, with TSP)
Inhibition of microbial activity:	3-h EC ₅₀ : >100 mg/l, NOEC: 100 mg/l (OECD 209, EC C.11)

12.2 Persistence and degradability

Biodegradation	Standard test is not applicable as the substance is inorganic. The degradation pathway is through simple dissociation into phosphates and sulphates and the corresponding cations (Ca ²⁺). The product should not enter in high quantities into waste water because it may act as a plant nutrient and causes eutrophication.
Hydrolysis:	No hydrolysable group is present, will completely dissociate into ions.

12.3 Bioaccumulative potential

Octanol-water partition coefficient (K _{ow}):	Not relevant as the substance is inorganic, but considered to be low (based on water solubility)
Bioconcentration factor(BCF):	Low potential for bioaccumulation (based on substance properties).

12.4 Mobility in soil

Adsorption coefficient:	Low potential for adsorption (based on substance properties).
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12.5 Results of PBT and vPvB assessment

According to Annex XIII of Regulation (EC) No 1907/2006, no PBT and vPvB assessment has been conducted since SSP is inorganic.

12.6 Other adverse effects: None Known**Section 13 - DISPOSAL CONSIDERATIONS**

Waste from residues: Depending on the level and nature of the contamination, reuse as fertilizer or send to an authorized collection site. The disposal should be performed according to local and national regulation, in accordance with the Directive 2008/98/CE. Avoid contamination of watercourses. Contact local authorities, in case of contamination. Controlled biodegradation in waste water treatment is possible.

Container: Empty containers/bags may retain some products residues, do not empty into drains. Containers should be cleaned by appropriate method and then re-used, sent for recycling or disposed as appropriate, in accordance with local and national regulations. Do not remove label until container is thoroughly cleaned.

Section 14 - TRANSPORT INFORMATION**International Transport Regulation**

Regulatory information	UN Number	Name	Transport hazard classes	Packaging group	Label	Special precautions
ADR/RID class	Not classified	-	-	-	-	-
ADNR class	Not classified	-	-	-	-	-
IMDG class	Not classified	-	-	-	-	-
IATA class	Not classified	-	-	-	-	-

Not regulated: Not classified as a dangerous material in accordance with "UN Orange Book" and the international codes of transport.

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Section 15 - REGULATORY INFORMATION

15.1 Safety, health and environmental regulation/legislation specific for the substance

- The mixture complies with Regulation (EC) n° 2003/2003 of the European Parliament and of the Council of 13 October relating to fertilizers.
- Classification and Labelling according to Regulation (EC) n° 1272/2008 criteria (CLP)
- Classification according to annex I of Directive 67/548/EEC (DSD)

15.2 Chemical Safety Assessment

In accordance with REACH Article 14, a Chemical Safety Assessment has been carried out for the multi-constituent substances SSP and TSP.

Section 16 - CHEMICAL SAFETY ASSESSMENT

16.1 Definitions and Acronyms

Annex I of Directive 67/548/EEC: The Annex I of the Directive 67/548/EEC contains a list of harmonized classifications for substances that are legally binding on the EU list. The list is regularly updated through Adaptations to Technical Progress; **CAS:** Chemical Abstract Service; **EC:** European Commission; **DNEL:** Derived No-Effect Level; **EC₅₀:** Median Effective concentration; **EPA:** United States Environmental Protection Agency; **EU:** European Union; **LD₅₀:** Median Lethal dose; **MMAD:** Mass median aerodynamic diameter; **NOAEL:** No Observed Adverse Effect Level; **NOEC:** No Observed Effect Concentration; **OECD:** Organization for Economic Co-operation and Development.; **PBT:** Persistent Bioaccumulative and Toxic; **SDS:** Safety data sheet; **vPvB:** very persistent and very bioaccumulative

16.2 References

- Guidance documents available on the European Chemicals Agency (ECHA) web site and Chemical Safety Report.

16.3 Complete texts of the Codes relating to classification

Classification and Labelling in accordance with Regulation (EC) n° 1272/2008 (CLP) and Chemical Safety Assessment (CSA)

The substances SSP and TSP are not included in section 3 of Annex VI of Regulation CLP (Table 3.1) nor in the first Adaptation to the Technical Progress. After a Chemical Safety Assessment (CSA) and by self-classification:

- Classification/Codes/Complete texts
Serious eye damage, Category 1, H318, Causes serious eye damage
- Codes/text
P280 – Wear eye protection.
P305+P351+P338+P310 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.

Classification in accordance with Directive 67/548/EEC (DSD)

The substances SSP and TSP are not classified as dangerous according to Annex I of Directive 67/548/EEC. In accordance with Directive 67/548/EEC criteria, by self-classification based on the performed CSA (chemistry safety assessment), they have to be classified as:

- Xi, Irritant

Risk phrase:

- R41, Risk of serious damage to eyes

16.4 Other references

Edition Date:	24/10/2017
Date of previous edition:	29/05/2017
Changes to this edition:	Marked with vertical line

The information in this safety sheet is provided in good faith and its accuracy is based on the knowledge of the product at the time of the edition. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any proceed, unless specified in the text.

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ANNEX

1 Exposure scenario (2) - Industrial use for formulation of preparations, intermediate use and end-use in industrial settings

Use descriptors related to the life cycle stage	SU3/10 PC12/19 PROC1/2/3/4/5/8a/8b/9/14 ERC2/6a
Sectors of use (SU)	1. Industrial uses: Uses of substances as such or in preparations at industrial sites (SU3) 2. Formulation (mixing) of preparations and/or re-packing (excluding alloys) (SU10)
Name of contributing environmental scenario (1) and corresponding ERC	1. Formulation of preparations (ERC2) 2. Industrial use resulting in manufacture of another substance (use of intermediates) (ERC6a)
List of names of contributing worker scenarios (2) and corresponding PROC	1. Use in closed process, no likelihood of exposure (PROC1) 2. Use in closed, continuous process with occasional controlled exposure (PROC2) 3. Use in closed batch process (synthesis or formulation) (PROC3) 4. Use in batch and other process (synthesis) where opportunity for exposure arises (PROC4) 5. Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) (PROC5) 6. Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities (PROC8a) 7. Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities (PROC8b) 8. Transfer of substance or preparation into small containers (dedicated filling line, including weighing) (PROC9) 9. Production of preparations or articles by tableting, compression, extrusion, palletisation (PROC14)

2.1 Contributing scenario (1) controlling environmental exposure

Formulation of preparations (ERC2) and industrial use resulting in manufacture of another substance (use of intermediates) (ERC6a).

An environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous for the environment.

2.1 Contributing scenario (2) controlling worker exposure for industrial use for formulation of preparations, intermediate use and end-use in industrial settings

All Process Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management Measures (RMMs) are identical. PROC1/2/3/4/5/8a/8b/9/14

Product characteristic:

- Solid, low dustiness

Amounts used: Not applicable

Frequency and duration of use/exposure: More than 4 hours per day

Human factors not influenced by risk management: Not applicable

Other given operational conditions affecting workers exposure:

Activities performed indoors.

Technical conditions and measures at process level (source) to prevent release:

Not applicable

Technical conditions and measures to control dispersion from source towards the worker:

1. Containment as appropriate
2. Good standard of general ventilation

Organizational measures to prevent /limit releases, dispersion and exposure: Not applicable

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

1. Chemical goggles (Personal protective equipment to reduce exposure of the eye to a negligible level)

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3 Exposure information and reference to its source

Information for contributing scenario 1

An environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous for the environment.

Information for contributing scenario 2

A qualitative approach was used to conclude safe use for workers. The leading toxicological effect is eye irritation (local endpoint), for which no DNEL can be derived as no dose-response information is available. As minimal systemic effects were only noted at such high levels of substance that humans are normally not exposed to (see DNELs), a quantitative assessment is not considered necessary.

4 Risk management measures related to workers at industrial sites and additional good practice advice beyond the REACH CSA

Containment as appropriate; Minimize number of staff exposed; Segregation of the emitting process; Effective contaminant extraction; Good standard of general ventilation; Minimization of manual phases; Avoidance of contact with contaminated tools and objects; Regular cleaning of equipment and work area; Management/supervision in place to check that RMMs in place are being used correctly and OCs followed; Training staff on good practice; Good standard of personal hygiene;


5 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

No additional risk management measures, besides those that are mentioned above, are needed to guarantee safe use for workers.

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<p align="center">1 Exposure scenario (3) - Professional use in formulation of preparations and end-use</p>			
Use descriptors related to the life cycle stage	SU22 PC12 PROC2/5/8a/8b/9/11/13/19 ERC8b/8d/8e/9b		
Sectors of use (SU)	1. Professional uses: Public domain (administration, education, entertainment, services, craftsmen) (SU22)		
Name of contributing environmental scenario (1) and corresponding ERC	1. Wide dispersive indoor use of reactive substances in open systems (ERC8b) 2. Wide dispersive outdoor use of processing aids in open systems (ERC8d) 3. Wide dispersive outdoor use of reactive substances in open systems (ERC8e) 4. Wide dispersive outdoor use of substances in closed systems (ERC 9b)		
List of names of contributing worker scenarios (2) and corresponding PROC	1. Use in closed, continuous process with occasional controlled exposure (PROC2) 2. Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) (PROC5) 3. Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities (PROC8a) 4. Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities (PROC8b) 5. Transfer of substance or preparation into small containers (dedicated filling line, including weighing) (PROC9) 6. Use in closed batch process (synthesis or formulation) (PROC11) 7. Treatment of articles by dipping and pouring (PROC13) 8. Hand-mixing with intimate contact and only PPE available (PROC19)		
<p>2.1 Contributing scenario (1) controlling environmental exposure Wide dispersive indoor use of reactive substances in open systems (ERC8b). Wide dispersive outdoor use of processing aids in open systems (ERC8d), of reactive substances in open systems (ERC8e) and use of substances in closed systems (ERC 9b). An environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous for the environment.</p>			
<p>2.2 Contributing scenario (2) controlling worker exposure for professional use in formulation of preparations and end-use All Process Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management Measures (RMMs) are identical. PROC2/5/8a/8b/9/11/13/19</p>			
<p>Product characteristic:</p> <ol style="list-style-type: none"> Solid, low dustiness Liquid, >25% substance in the product 			
<p>Amounts used: Not applicable</p>			
<p>Frequency and duration of use/exposure: More than 4 hours per day</p>			
<p>Human factors not influenced by risk management: Not applicable</p>			
<p>Other given operational conditions affecting workers exposure: Activities performed in or outdoors</p>			
<p>Technical conditions and measures at process level (source) to prevent release: Not applicable</p>			
<p>Technical conditions and measures to control dispersion from source towards the worker</p> <ol style="list-style-type: none"> Containment as appropriate Good standard of general ventilation Avoid splashing. Use specific dispensers and pumps specifically designed to prevent splashes/spills/exposure to occur 			
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Organizational measures to prevent /limit releases, dispersion and exposure: Not applicable

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

1. Chemical goggles (Personal protective equipment to reduce exposure of the eye to a negligible level).

3 Exposure information and reference to its source

Information for contributing scenario 1

An environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous for the environment.

Information for contributing scenario 2

A qualitative approach was used to conclude safe use for workers. The leading toxicological effect is eye irritation (local endpoint), for which no DNEL can be derived as no dose-response information is available. As minimal systemic effects were only noted at such high levels of substance that humans are normally not exposed to (see DNELs), a quantitative assessment is not considered necessary.

4 Risk management measures related to workers in professional settings and additional good practice advice beyond the REACH CSA

Containment as appropriate; Minimize number of staff exposed; Segregation of the emitting process; Effective contaminant extraction; Good standard of general ventilation; Minimization of manual phases; Avoidance of contact with contaminated tools and objects; Regular cleaning of equipment and work area; Management/supervision in place to check that RMMs in place are being used correctly and OCs followed; Training staff on good practice; Good standard of personal hygiene

5 Guidance to DU to evaluate whether he works inside the boundaries set by the ES

No additional risk management measures, besides those that are mentioned above, are needed to guarantee safe use for workers.

1 Exposure scenario (4) - Consumer end-use of fertilizers


Use descriptors related to the life cycle stage

SU21
PC12
ERC8b/8e

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	SAFETY DATA SHEET PK FERTILIZER	CODE: DS-074-I VERSION: 5 DATE: 24-10-2017 PAGE: 11/11
Sectors of use (SU)	1. Consumer uses (SU21)	
Name of contributing environmental scenario (1) and corresponding ERC	1. Wide dispersive indoor use of reactive substances in open systems (ERC8b) 2. Wide dispersive outdoor use of reactive substances in open systems (ERC8e)	
List of names of contributing consumer scenarios (2) and corresponding PC	1. Fertilizers (PC12)	
2.1 Contributing scenario (1) controlling environmental exposure Wide dispersive indoor use of reactive substances in open systems (ERC8b) and wide dispersive outdoor use of reactive substances in open systems (ERC8e). An environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous for the environment.		
2.2 Contributing scenario (2)) controlling worker exposure for consumer end-use of fertilizers All Product Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management Measures (RMMs) are identical. SSP is classified corrosive to eyes (R41 under 67/548/EEC and H318 under CLP). Exposure to eye irritating dilutions of SSP can occur during consumer use of fertilizers (PC12) due to dust/splashes. However, it has to be noted that the end diluted products can lead to levels at which no eye irritation will occur.		
Product characteristic: 1. Solid, low dustiness 2. Liquid		
Amounts used: Not applicable		
Frequency and duration of use/exposure: Not applicable		
Human factors not influenced by risk management: Not applicable		
Other given operational conditions affecting workers exposure: Activities performed in or outdoors.		
Conditions and measures related to information and behavioural advice to consumers: Avoid splashing		
Conditions and measures related to personal protection and hygiene 1. Use chemical goggles 2. Instructions addressed to the consumer via product labelling		
3 Exposure information and reference to its source		
Information for contributing scenario 1 An environmental assessment has not been performed as the substance does not meet the criteria for being classified as dangerous for the environment.		
Information for contributing scenario 2 A qualitative approach was used to conclude safe use for consumers. The leading toxicological effect is eye irritation (local endpoint), for which no DNEL can be derived as no dose-response information is available. As minimal systemic effects were only noted at such high levels of substance that humans are normally not exposed to (see DNELs), a quantitative assessment is not considered necessary.		
4 Guidance to DU to evaluate whether he works inside the boundaries set by the ES No additional risk management measures, besides those that are mentioned above, are needed to guarantee safe use for workers/consumers for use of fertilizers. Use chemical goggles		

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