

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 17.07.2018

version 8

Revision: 17.07.2018

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

- **1.1 Product identifier**
- **Trade name:** PK - Fertilizers
- **Synonyms** GPK
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
Relevant identified uses:  
Fertiliser  
No uses advised against.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
ICL Fertilizers Europe C. V.  
Fosfaatweg 48 1013 BM  
P.O. Box 313, 1000 AH Amsterdam,  
The Netherlands  
Tel.: +31-(0)20-5815132  
Fax: +31-(0)20-6868328  
E-mail: msdsinfo@icl-group.com
- **1.4 Emergency telephone number:** In Europe call: +31-20-5815100 (24 hours a day, 365 days a year)

**SECTION 2: Hazards identification**

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The product is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS05

- **Signal word** Danger
- **Hazard-determining components of labelling:**  
Superphosphate (SSP)  
Superphosphates, concd (TSP)
- **Hazard statements**  
H318 Causes serious eye damage.
- **Precautionary statements**  
P280 Wear protective gloves / 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.  
P310 Immediately call a POISON CENTER/doctor.
- **2.3 Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

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· vPvB: Not applicable.

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

· 3.2 Mixtures

· **Description:** Mixture: consisting of the following components.

· **Components:**

CAS: 8011-76-5 EINECS: 232-379-5 Reg.nr.: 01-2119488967-11-0004	Superphosphate (SSP)	☠ Eye Dam. 1, H318	>3%
CAS: 65996-95-4 EINECS: 266-030-3 Reg.nr.: 01-2119493057-33-0000	Superphosphates, concd (TSP)	☠ Eye Dam. 1, H318	>3%
CAS: 7778-80-5 EINECS: 231-915-5 Reg.nr.: 01-2119489441-34-0000	potassium sulfate	⚠ Eye Irrit. 2, H319	0-75%
CAS: 7447-40-7 EINECS: 231-211-8	Potassium chloride		0-75%
CAS: 12291-65-5	Colemanite		0-10%
CAS: 1319-33-1	Ulexite		0-10%

Magnesium oxide is exempted from Registration according to Reg. (EC) 1907/2006, Article 2(7)(b)

Potassium chloride, Colemanite, Ulexite are exempted from the obligation to register in accordance with Reg. (EC) 1907/2006 (natural mineral not modified chemically).

· SVHC None

· **Additional information:** For the wording of the listed hazard phrases refer to section 16.

**SECTION 4: First aid measures**

· 4.1 Description of first aid measures

· **General information:** Do not leave affected persons unattended.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

· **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

· **After eye contact:**

Rinse opened eye for several minutes under running water.

Seek medical treatment.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

If symptoms persist consult doctor.

NOTE: Never give an unconscious person anything to drink.

· 4.2 Most important symptoms and effects, both acute and delayed Causes serious eye damage.

· 4.3 Indication of any immediate medical attention and special treatment needed No further relevant information available.

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### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
- **Suitable extinguishing agents:**  
The product is not flammable.  
Use fire extinguishing methods suitable to surrounding conditions.  
Foam  
Fire-extinguishing powder  
Carbon dioxide  
Water spray
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **5.2 Special hazards arising from the substance or mixture**  
In case of fire, the following can be released:  
Phosphorus oxides (e.g. P<sub>2</sub>O<sub>5</sub>)  
Sulphur oxides (SO<sub>x</sub>)  
Hydrogen chloride (HCl)  
Chlorine  
Danger of toxic fluorine based pyrolysis products.
- **5.3 Advice for firefighters**
- **Protective equipment:**  
Wear self-contained respiratory protective device.  
Wear fully protective suit.
- **Additional information** Collect contaminated fire fighting water separately. It must not enter the sewage system.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Avoid formation of dust.  
Ensure adequate ventilation  
Use respiratory protective device against the effects of fumes/dust/aerosol.  
Wear protective clothing.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:**  
Pick up mechanically.  
Damp down dust with water spray.
- **6.4 Reference to other sections**  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of dust.
- **Information about fire - and explosion protection:**  
The product is not flammable.  
No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Requirements to be met by storerooms and receptacles:** Store in dry conditions.

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- **Information about storage in one common storage facility:**  
Do not store together with alkalis (caustic solutions).  
Do not store together with urea.
- **Further information about storage conditions:**  
Protect from heat and direct sunlight.  
Protect from humidity and water.
- **7.3 Specific end use(s)** No further relevant information available.

## SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **DNELs**  
65996-95-4 Suprphosphphate, conc (TSP) & 8011-76-5 Superphosphate (SSP):  
For workers:  
Long-term-systemic effects (inhalation) DNEL: 3.1 mg/m<sup>3</sup>  
Long-term-systemic effects (dermal) DNEL: 17.4 mg/kg bw/day  
For general population:  
Long-term-systemic effects (inhalation) DNEL: 0.9 mg/m<sup>3</sup>  
Long-term-systemic effects (dermal) DNEL: 10.4 mg/kg bw/day  
Long-term-systemic effects (oral) DNEL: 2.1 mg/kg bw/day  
7778-80-5 potassium sulfate:  
For workers:  
Long-term-systemic effects (inhalation) DNEL: 37.6 mg/m<sup>3</sup>  
Long-term-systemic effects (dermal) DNEL: 21.3 mg/kg bw/day  
For general population:  
Long-term-systemic effects (inhalation) DNEL: 11.1 mg/m<sup>3</sup>  
Long-term-systemic effects (dermal) DNEL: 12.8 mg/kg bw/day  
Long-term-systemic effects (oral) DNEL: 12.8 mg/kg bw/day
- **PNECs**  
65996-95-4 Superphosphates, conc (TSP) & 8011-76-5 Superphosphate (SSP):  
PNEC aqua (freshwater): 1.7 mg/L  
PNEC aqua (marine water): 0.17 mg/L  
PNEC aqua (intermittent releases): 17 mg/L  
PNEC STP: 10 mg/L  
7778-80-5 potassium sulfate:  
PNEC aqua (freshwater): 0.68 mg/L  
PNEC aqua (marine water): 0.068 mg/L  
PNEC aqua (intermittent releases): 6.8 mg/L  
PNEC STP: 10 mg/L
- **Additional information:**  
Ventilation must be sufficient to maintain TLV-TWA below 3 mg/m<sup>3</sup>, respirable particles, and 10 mg/m<sup>3</sup>, inhalable particles [ACGIH recommendation for Particles (Insoluble or poorly soluble). Not Otherwise Specified (PNOS)]
- **8.2 Exposure controls**
- **General protective and hygienic measures:**  
The usual precautionary measures are to be adhered to when handling chemicals.  
Keep away from foodstuffs, beverages and feed.  
Wash hands before breaks and at the end of work.  
Do not eat or drink while working.

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Avoid contact with the eyes and skin.

· **Respiratory protection:**

Use suitable respiratory protective device in case of insufficient ventilation.



Filter P2

Filter FFP2

(EN 143 or EN 149)

· **Protection of hands:**



Protective gloves

· **Material of gloves**

Butyl rubber, BR

Nitrile rubber, NBR

Chloroprene rubber, CR

· **Penetration time of glove material**

For the mixture of chemicals mentioned below the penetration time has to be at least 480 minutes (Permeation according to EN 374 Part 3: Level 6).

· **Eye protection:**



Tightly sealed goggles (EN 166)

· **Body protection:** Protective work clothing

· **Limitation and supervision of exposure into the environment**

The product should not get in high quantities into waste water because it may act as a plant nutrient and cause eutrophication.

**SECTION 9: Physical and chemical properties**

· **9.1 Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Granulate

Colour: Dark grey

Grey

· **Odour:** Acidic

· **pH-value at 20 °C:** 3-4

· **Change in condition**

Melting point/freezing point: Not applicable

Initial boiling point and boiling range: Not applicable

· **Flash point:** Not applicable.

· **Flammability (solid, gas):** Product is not flammable.

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- **Ignition temperature:** Not applicable
- **Decomposition temperature:** >200 °C  
Thermal decomposition on losing water.
- **Auto-ignition temperature:** Product is not selfigniting.  
(based on molecular structure)
- **Explosive properties:** Product does not present an explosion hazard.  
(based on molecular structure)
- **Explosion limits:** Not applicable
- **Oxidising properties:** This product does not contain any oxidizing agents.
- **Bulk density at 20 °C:** 1000-1200 kg/m<sup>3</sup>
- **Solubility in / Miscibility with water:** Partly soluble.
- **Partition coefficient: n-octanol/water:** This product is inorganic.  
Not applicable
- **Viscosity:** This product is solid. Viscosity is only relevant to liquids.  
Not applicable
- **9.2 Other information** No further relevant information available.

### SECTION 10: Stability and reactivity

- **10.1 Reactivity** No decomposition if used according to specifications.
- **10.2 Chemical stability** No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions** Reacts with strong alkali.
- **10.4 Conditions to avoid**  
To avoid thermal decomposition do not overheat.  
Water
- **10.5 Incompatible materials:**  
Alkalis  
Avoid urea, HCl can be formed
- **10.6 Hazardous decomposition products:**  
Formation of toxic gases is possible during heating or in case of fire.  
Phosphorus oxides (e.g. P<sub>2</sub>O<sub>5</sub>)  
Sulphur oxides (SO<sub>x</sub>)  
Hydrogen chloride (HCl)  
Chlorine  
Danger of toxic fluorine based pyrolysis products.

### SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

· **LD/LC50 values relevant for classification:**

7778-80-5 potassium sulfate

Oral	LD50	>2000 mg/kg (rat) (OECD 425 (read-across))
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Dermal	LD50	>2000 mg/kg (rat) (OECD 402)
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<b>7447-40-7 Potassium chloride</b>		
Oral	LD50	3020 mg/kg (rat)
<b>7783-28-0 diammonium hydrogenorthophosphate</b>		
Oral	LD50	>2,000 mg/kg (rat) (OECD 425 (read across for SSP,TSP))
Dermal	LD50	>5,000 mg/kg (rat) (OECD 402 (read across for SSP, TSP))
Inhalative	LC50/4 h	>5 mg/l (rat) (OECD 403, EC B2 (read across for SSP))

· **Primary irritant effect:**

· <b>Effect Species Method</b>		
<b>8011-76-5 Superphosphate (SSP)</b>		
Irritation of eyes	OECD 405, EC B.5	irritating (rabbit)
<b>65996-95-4 Superphosphates, concd (TSP)</b>		
Irritation of eyes	OECD 405, EC B.5	irritating (rabbit)
<b>7778-80-5 potassium sulfate</b>		
Irritation of eyes	OECD 437	irritating (rabbit)

· **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.

· **Serious eye damage/irritation:**

Causes serious eye damage.

· **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

· **Toxicokinetics, metabolism and distribution**

This product dissociates into calcium, magnesium, sulfate and phosphate ions, which are normal body and nutritional components.

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

· **Germ cell mutagenicity**

Based on available data, the classification criteria are not met.

according to OECD 471, CAS 65996-95-4 Superphosphate concd, CAS 7778-80-5 potassium sulfate

OECD 473, CAS 8011-76-5 single superphosphate, CAS 7778-80-5 potassium sulfate

· **Carcinogenicity:** Based on available data, the classification criteria are not met.

· **Toxicity for reproduction:**

Based on available data, the classification criteria are not met.

65996--95-4 Superphosphate, concd (OECD 422):

reproductive toxicity:  $\geq 1500$  mg/kg bw/day; rat, oral

developmental toxicity: NOAEL : 750 mg/kg bw/day; rat; oral

7778-80-5 potassium sulfate (OECD 422):

reproductive / developmental toxicity: NOAEL:  $\geq 1500$  mg/kg bw/day; rat, oral

· **STOT-single exposure** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure**

Based on available data, the classification criteria are not met.

<b>65996-95-4 Superphosphates, concd (TSP)</b>		
Oral	NOAEL	250 mg/kg bw/day (rat) (OECD 422, subacute)
<b>7778-80-5 potassium sulfate</b>		
Oral	NOAEL	1500 mg/kg bw/day (rat) (OECD 422, 28 dias)

· **Aspiration hazard** No data available

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**SECTION 12: Ecological information**

· **12.1 Toxicity**

· **Aquatic toxicity:**

**7778-80-5 potassium sulfate**

EC50/48 h (static) 720 mg/L (*Daphnia magna*) (EPA, freshwater)

LC50/96 h (static) 680 mg/L (*Fathead minnow fish*) (EPA, freshwater)

**8011-76-5 Superphosphate (SSP)**

LC50/72 h 1790 mg/L (*Daphnia carinata*) (freshwater)

**65996-95-4 Superphosphates, concd (TSP)**

EC50/72 h (static) >87.6 mg/L (algae) (OECD 201)

NOEC ≥87.6 mg/L

**7447-40-7 Potassium chloride**

EC50/120 h 1337 mg/l (algae)

EC50/21 d 130 mg/l (*Daphnia magna*)

EC50/48 h 660 mg/L (*Daphnia magna*)

LC50/96 h 880 mg/L (*Fathead minnow fish*)

· **12.2 Persistence and degradability** Anorganic product; therefore no biodegradation tests are applicable.

· **12.3 Bioaccumulative potential**

Low potential for bioaccumulation (based on substance properties)

This substance is highly water soluble and dissociating.

· **12.4 Mobility in soil** Low potential for adsorption (based on substance properties).

· **Ecotoxicological effects:**

· **Behaviour in sewage processing plants:**

· **Type of test**    **Effective concentration**    **Method**    **Assessment**

**7778-80-5 potassium sulfate**

EC50 >100 mg/L (activated sludge)

NOEC: 100 mg/L

**8011-76-5 Superphosphate (SSP)**

EC50/3 h >100 mg/L (activated sludge) (OECD 209, EC C.11)

· **General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Other adverse effects** No further relevant information available.

**SECTION 13: Disposal considerations**

· **13.1 Waste treatment methods**

· **Recommendation**

This product is used as fertiliser. However, large spills can kill vegetation. Prevent large quantities from entering waterways. If uncontaminated, sweep up or collect, and reuse as product. If contaminated with other materials, collect in suitable containers.

Smaller quantities can be disposed of with household waste.

Disposal must be made in accordance with Local Authority requirements.

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· **European waste catalogue**

02 01 08\* agrochemical waste containing hazardous substances

· **Uncleaned packaging:**

· **Recommendation:**

Packaging may be reused or recycled after cleaning.

Packagings that may not be cleansed are to be disposed of in the same manner as the product.

Disposal must be made according to official regulations.

· **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

· **14.1 UN-Number**

· DOT, ADR, ADN, IMDG, IATA

Void

· **14.2 UN proper shipping name**

· DOT, ADR, ADN, IMDG, IATA

Void

· **14.3 Transport hazard class(es)**

· DOT

None

· Class

Void

· ADR, ADN, IMDG, IATA

· Class

Void

· **14.4 Packing group**

· DOT, ADR, IMDG, IATA

Void

· **14.5 Environmental hazards:**

· Marine pollutant:

None

· **14.6 Special precautions for user**

Not applicable.

· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

· **Transport/Additional information:**

Not dangerous according to the above specifications.

· ADR

· Tunnel restriction code

Not applicable

· UN "Model Regulation":

Void

### SECTION 15: Regulatory information

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

Directive 2000/60 EC (phosphates)

· **Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

· **Hazard pictograms**



GHS05

· **Signal word Danger**

· **Hazard-determining components of labelling:**

Superphosphate (SSP)

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Superphosphates, concd (TSP)

· **Hazard statements**

H318 Causes serious eye damage.

· **Precautionary statements**

P280 Wear protective gloves / 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.

P310 Immediately call a POISON CENTER/doctor.

· **National regulations:**

· **Additional classification according to Decree on Hazardous Materials, Annex II:** Not applicable

· **Other regulations, limitations and prohibitive regulations**

· **Substances of very high concern (SVHC) according to REACH, Article 57** Not applicable

· **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

**SECTION 16: Other information**

· **Relevant phrases**

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

· **Department issuing SDS:**

HERA Division

telephone: +/972-8-6297835

telefax: +/972-8-6297832

e-mail: msdsinfo@icl-group.com

· **Abbreviations and acronyms:**

ICAO: International Civil Aviation Organisation

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

NOAEL: No Observable Adverse Effect Level

NOEC: No Observable Effect Concentration

OECD: Organisation for Economic Co-operation and Development

· **\* Data compared to the previous version altered.**

The sections where alterations took place are marked with an asterisk in the left border.

· **Disclaimer**

Although the information and recommendations set forth herein (hereinafter ""information"") are presented in good faith and believed to be correct as of the date hereof, we make no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving same will make their own determination as to its safety and suitability for their purposes prior to use. In no event will we be responsible for damages of any nature whatsoever resulting from the use of or reliance upon information.

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FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE, ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH THE INFORMATION REFERS.

**Annex: Exposure scenario 1**

· **Short title of the exposure scenario**

Industrial use for formulation of preparations, intermediate use and end-use in industrial settings.

· **Sector of Use**

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

SU10 Formulation [mixing] of preparations and/or re-packaging (excluding alloys)

· **Product category**

PC12 Fertilisers

PC19 Intermediate

· **Process category**

PROC1 Chemical production or refinery in closed process without likelihood of exposure or processes with equivalent containment conditions.

PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions

PROC3 Manufacture or formulation in the chemical industry in closed batch processes with occasional controlled exposure or processes with equivalent containment condition

PROC4 Chemical production where opportunity for exposure arises

PROC5 Mixing or blending in batch processes

PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities

PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities

PROC9 Transfer of substance or mixture into small containers (dedicated filling line, including weighing)

PROC14 Tableting, compression, extrusion, pelletisation, granulation

· **Environmental release category**

ERC2 Formulation into mixture

ERC6a Use of intermediate

· **Description of the activities / processes covered in the Exposure Scenario**

All Process Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management Measures (RMMs) are identical.

· **Conditions of use**

· **Duration and frequency**

Frequency of use:

5 workdays/week

> 4 hrs (>half working shift).

· **Environment**

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

· **Physical parameters**

The data on the physical - chemical properties in the Exposure Scenario is based on the properties of the mixture.

· **Physical state**

Solid in various forms

Liquid

Low dustiness

· **Used amount per time or activity** Not applicable

· **Other operational conditions**

· **Other operational conditions affecting worker exposure**

Indoor application.

Normally no personal respiratory protection required.

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- **Risk management measures**
- **Worker protection**
- **Organisational protective measures** Not applicable
- **Technical protective measures**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of dust.
- **Personal protective measures**  
Tightly sealed goggles (EN 166)  
Avoid contact with the eyes.
- **Disposal measures**
- **Waste type** 02 01 08\* agrochemical waste containing dangerous substances
- **Exposure estimation**  
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.
- **Environment**  
An environmental assessment has not been performed as the substance/mixture does not meet the criteria for being classified as dangerous for the environment.
- **Guidance for downstream users**  
No additional risk management measures (RMMs), besides those that are mentioned above, are needed to guarantee safe use for workers.
- **Additional good practices advice beyond the REACH CSA:**  
Management/supervision in place to check that RMMs in place are being used correctly and OCs followed  
Training staff on good practice  
Keep good industrial hygiene.  
Use suitable respiratory protective device in case of insufficient ventilation.

\* **Annex: Exposure scenario 2**

- **Short title of the exposure scenario** Professional use in formulation of preparations and end-use in fertiliser
- **Sector of Use** SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)
- **Product category** PC12 Fertilisers
- **Process category**  
PROC2 Chemical production or refinery in closed continuous process with occasional controlled exposure or processes with equivalent containment conditions  
PROC5 Mixing or blending in batch processes  
PROC8a Transfer of substance or mixture (charging and discharging) at non-dedicated facilities  
PROC8b Transfer of substance or mixture (charging and discharging) at dedicated facilities  
PROC11 Non industrial spraying  
PROC13 Treatment of articles by dipping and pouring  
PROC19 Manual activities involving hand contact
- **Environmental release category**  
ERC8b Widespread use of reactive processing aid (no inclusion into or onto article, indoor)  
ERC8d Widespread use of non-reactive processing aid (no inclusion into or onto article, outdoor)  
ERC8e Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)
- **Description of the activities / processes covered in the Exposure Scenario**  
All Process Categories are covered by this contributing scenario as all Operational Conditions (OCs) and Risk Management Measures (RMMs) are identical.

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- **Conditions of use**
- **Duration and frequency**  
Frequency of use:  
5 workdays/week  
> 4 hrs (>half working shift).
- **Environment**  
An environmental assessment has not been performed as the substance/mixture does not meet the criteria for being classified as dangerous for the environment.
- **Physical parameters**
- **Physical state**  
Solid  
Liquid  
Low dustiness
- **Other operational conditions**
- **Other operational conditions affecting worker exposure**  
Indoor application.  
Outdoor application.  
Normally no personal respiratory protection required.
- **Risk management measures**
- **Worker protection**
- **Technical protective measures**  
Ensure good ventilation/exhaustion at the workplace.  
Prevent formation of dust.  
Avoid splashing. Use specific dispensers and pumps specifically designed to prevent splashes/spills/exposure to occur.
- **Personal protective measures** Tightly sealed goggles (EN 166)
- **Disposal measures**
- **Waste type 02 01 08\***: agrochemical waste containing hazardous substances
- **Exposure estimation**  
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.
- **Environment**  
An environmental assessment has not been performed as the substance/mixture does not meet the criteria for being classified as dangerous for the environment.
- **Guidance for downstream users**  
No additional risk management measures (RMMs), besides those that are mentioned above, are needed to guarantee safe use for workers.
- **Additional good practices advice beyond the REACH CSA:**  
Management/supervision in place to check that RMMs in place are being used correctly and OCs followed  
Training staff on good practice  
Keep good industrial hygiene.  
Use suitable respiratory protective device in case of insufficient ventilation.

\* **Annex: Exposure scenario 3**

- **Short title of the exposure scenario** Consumer end-use of fertilisers and other products
- **Sector of Use SU21** Consumer uses: Private households / general public / consumers
- **Product category PC12** Fertilisers
- **Environmental release category**  
ERC8b Widespread use of reactive processing aid (no inclusion into or onto article, indoor)

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ERC8e Widespread use of reactive processing aid (no inclusion into or onto article, outdoor)

· **Description of the activities / processes covered in the Exposure Scenario** Distributing of fertilisers

· **Conditions of use**

· **Duration and frequency** Not applicable

· **Environment**

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

· **Physical parameters**

· **Physical state**

Solid

Liquid

Low dustiness

· **Used amount per time or activity** Not applicable

· **Other operational conditions**

· **Other operational conditions affecting worker exposure**

Indoor application.

Outdoor application.

· **Risk management measures**

· **Worker protection**

· **Personal protective measures** Tightly sealed goggles (EN 166)

· **Disposal measures**

· **Waste type** 02 01 08\* agrochemical waste containing dangerous substances

· **Exposure estimation**

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.

· **Environment**

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

· **Guidance for downstream users**

No additional risk management measures (RMMs), besides those that are mentioned above, are needed to guarantee safe use for consumers.

· **Additional good practices advice beyond the REACH CSA:**

Prevent formation of dust.

Wear protective gloves/eye protection.

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