



POTASSIUM NITRATE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Date of issue: 01/03/2011

Revision date: 24/05/2016

Supersedes: 03/02/2015

Version: 8.0

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

1.1. Product identifier

| | |
|-----------------------|---------------------------------------|
| Product form | : Substance |
| Trade name | : POTASSIUM NITRATE |
| Chemical name | : Potassium nitrate |
| EC no | : 231-818-8 |
| CAS No | : 7757-79-1 |
| REACH registration No | : 01-2119488224-35-0029 |
| Product code | : PREX-002 |
| Formula | : KNO ₃ |
| Synonyms | : Saltpeter; Acidic Potassium Nitrate |
| Product group | : Inorganic salt. |

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

1.2.1. Relevant identified uses

| Title | Use descriptors |
|--|--|
| Professional use: Formulation of preparations, Specific end uses (ES Ref.: ES2) | SU22, PC4, PC12, PC16, PC17, PC37, PROC2, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC16, PROC19, PROC26, ERC8a, ERC8b, ERC8c, ERC8d, ERC8e, ERC8f, ERC9a, ERC9b |
| Consumer use: Fertilizer & Other Products (ES Ref.: ES3) | SU21, PC4, PC12, PC35, PC39, ERC8a, ERC8b, ERC8d, ERC8e, ERC9a, ERC9b |

Full text of use descriptors: see section 16

1.2.2. Uses advised against

| Title | Use descriptors | Reason |
|--------------|-----------------|--------|
| Consumer use | SU21, PC0, PC11 | |

Full text of use descriptors: see section 16

1.3. Details of the supplier of the safety data sheet

PRAYON (O.R.2.) KEMAPCO
Rue Joseph Wauters, 144
B-4480 Engis - Belgique-Belgium
T +32 (0)4 273 92 11 - F +32 (0)4 273 96 35
Reachcustomer@prayon.be - www.prayon.be

1.4. Emergency telephone number

| Country | Organisation/Company | Address | Emergency number |
|----------------|--|---|---|
| | National Poisons Information Service (Belfast Centre) Royal Victoria Hospital | Grosvenor Road BT12 6BA Belfast | 0870 600 6266 (UK only), |
| United Kingdom | National Poisons Information Service (Birmingham Centre) City Hospital, Guy's & St Thomas' Hospital Trust | Dudley Road B18 7QH Birmingham | 0844 892 0111 (UK only, Monday to Friday, 08.00 to 18.00 hours) |
| United Kingdom | National Poisons Information Service (Cardiff Centre) Gwenwyn Ward, Wolfson Unit | Penarth CF64 2XX Cardiff | 0844 892 0111 (UK only, Monday to Friday, 08.00 to 18.00 hours) |
| United Kingdom | NPIS Edinburgh (Scottish Poisons Information Bureau) Royal Infirmary of Edinburgh, Centre Hospitalier Universitaire Bab el Oued | 51 Little France Crescent EH16 4SA Edinburgh | 0844 892 0111 (UK only, Monday to Friday, 08.00 to 18.00 hours) |
| United Kingdom | Guy's & St Thomas' Poisons Unit Medical Toxicology Unit, Centre Hospitalier Universitaire de Constantine | Avonley Road SE14 5ER London | 0870 243 2241 |
| United Kingdom | National Poisons Information Service (Newcastle Centre) Regional Drugs and Therapeutics Centre | Claremont Place Newcastle-upon-Tyne NE1 4LP Newcastle | 0844 892 0111 (UK only, Monday to Friday, 08.00 to 18.00 hours) |

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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Ox. Sol. 3 H272

Full text of hazard classes and H-statements : see section 16

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)



GHS03

Signal word (CLP) : Warning
Hazard statements (CLP) : H272 - May intensify fire; oxidiser
Precautionary statements (CLP) : P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking
P221 - Take any precaution to avoid mixing with Other chemicals, combustible materials

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substance

Name : POTASSIUM NITRATE
CAS No : 7757-79-1
EC no : 231-818-8

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|-------------------|--|--------|---|
| Potassium nitrate | (CAS No) 7757-79-1 (EC no) 231-818-8 (REACH-no) 012119488224-35-0028 | > 97,5 | Ox. Sol. 3, H272 |

Full text of H-statements: see section 16

3.2. Mixture

Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove victim to fresh air. Assure fresh air breathing. If breathing is difficult, give oxygen. Call a physician immediately.
First-aid measures after skin contact : Wash immediately with plenty of soap and water. Remove contaminated clothing and shoes. Take off contaminated clothing and wash before reuse. Obtain medical attention if irritation persists.
First-aid measures after eye contact : In case of eye contact, remove contact lenses and immediately rinse with clean water for 20-30 minutes. Call a doctor.
First-aid measures after ingestion : If swallowed, rinse mouth with water (only if the person is conscious). Do not induce vomiting. Call a doctor.

4.2. Most important symptoms and effects, both acute and delayed

Symptoms/injuries : Respiratory tract irritation. Eye irritation. Skin irritation. Can occur: gastrointestinal disturbance.

4.3. Indication of any immediate medical attention and special treatment needed

See Heading 4.1.

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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : All extinguishing media can be used.

5.2. Special hazards arising from the substance or mixture

Fire hazard : On exposure to high temperature, may decompose, releasing toxic gases. Oxidising. Reacts with combustible materials and increases combustion even in the absence of air. Poisonous nitrous gasses may form in case of fire.

5.3. Advice for firefighters

Precautionary measures fire : Do not enter fire area without proper protective equipment, including respiratory protection.
Other information : Exercise caution when fighting any chemical fire. Avoid mechanical shock. Avoid high temperatures.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Provide adequate ventilation to minimize dust and/or vapour concentrations. Equip cleanup crew with proper protection. Personal protective equipment (see section (s) :8.2).

6.1.1. For non-emergency personnel

No additional information available

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent entry to sewers, soils and natural waters. Notify authorities if product enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Collect spill when it is dry. Sweep or shovel spills into appropriate container for disposal.

6.4. Reference to other sections

See section 8 and 13 for more information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Avoid dust production. Avoid any direct contact with the product. Packagings, even those that have been emptied, will retain product residue. Always obey safety warnings and handle empty packagings as if they were full. Keep away from sources of ignition. Both local exhaust and general room ventilation are usually required. Keep away from heat and direct sunlight.

Hygiene measures : When using do not eat, drink or smoke. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Remove contaminated clothing and shoes.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in dry, cool, well-ventilated area. Keep packaging closed when not in use. Keep away from combustible material. Keep away from naked flames/heat. Keep away from sources of ignition.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

| POTASSIUM NITRATE (7757-79-1) | |
|--|---------------------------|
| DNEL/DMEL (Workers) | |
| Long-term - systemic effects, dermal | 20,8 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 36,7 mg/m³ |
| DNEL/DMEL (General population) | |
| Long-term - systemic effects, oral | 12,5 mg/kg bodyweight/day |
| Long-term - systemic effects, inhalation | 10,9 mg/m³ |
| Long-term - systemic effects, dermal | 12,5 mg/kg bodyweight/day |
| PNEC (Water) | |
| PNEC aqua (freshwater) | 0,45 mg/l |
| PNEC aqua (marine water) | 0,045 mg/l |
| PNEC aqua (intermittent, freshwater) | 4,5 mg/l |
| PNEC (STP) | |
| PNEC sewage treatment plant | 18 mg/l |

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8.2. Exposure controls

| | |
|----------------------------------|---|
| Appropriate engineering controls | : Good ventilation of the workplace required. Please refer to the annex (exposure scenarios). |
| Hand protection | : Use gloves resistant to chemical products corresponding to EN 374:3". Take advice to gloves' manufacturer ." |
| Skin and body protection | : Protective clothing (with elasticated cuffs and closed neck) |
| Respiratory protection | : Appropriate dust or mist respirator should be used if airborne particles are generated when handling this material (Type FFP2 in accordance with EN 140 or 149) |
| Environmental exposure controls | : Avoid release to the environment. |

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|--|---|
| Physical state | : Crystalline powder |
| Molecular mass | : 101 g/mol |
| Colour | : white. |
| Odour | : odourless. |
| Odour threshold | : Not applicable |
| pH | : 5 - 8 |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point | : 335 °C |
| Freezing point | : No data available |
| Boiling point | : > 300 °C |
| Flash point | : No data available |
| Auto-ignition temperature | : Not flammable |
| Decomposition temperature | : > 600 °C |
| Flammability (solid, gas) | : Not flammable |
| Vapour pressure | : Not applicable |
| Relative vapour density at 20 °C | : Not applicable |
| Relative density | : No data available |
| Density | : 2,1 g/cm³ |
| Solubility | : Water: > 300 g/l Material highly soluble in water |
| Log Pow | : Not applicable |
| Log Kow | : Not applicable |
| Viscosity, kinematic | : Not applicable |
| Viscosity, dynamic | : Not applicable |
| Explosive properties | : Product is not explosive. |
| Oxidising properties | : Non oxidizing material according to EC criteria. |
| Explosive limits | : Not explosive |

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Under normal circumstances (temperature and pression) the product is stable.

10.2. Chemical stability

Stable under normal conditions (Handling and storage).

10.3. Possibility of hazardous reactions

Reacts violently with : Acids. Combustibles. Metal powder. Reducing agents.

10.4. Conditions to avoid

Contact with combustible material may cause fire.

10.5. Incompatible materials

Flammable materials. combustibles. Reducing agent.

10.6. Hazardous decomposition products

On exposure to high temperature, may decompose, releasing toxic gases. (+/- 400 °C).

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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Not classified

| POTASSIUM NITRATE (7757-79-1) | |
|-------------------------------|------------------------------------|
| LD50 oral rat | > 2000 mg/kg (OECD 425) |
| LD50 dermal rat | > 5000 mg/kg (OECD 402) |
| LC50 inhalation rat (mg/l) | > 527 mg/m ³ (OECD 403) |

Skin corrosion/irritation : Not irritating. rabbit. OECD 404
pH: 5 - 8

Serious eye damage/irritation : Not irritating. rabbit. OECD 405
pH: 5 - 8

Respiratory or skin sensitisation : Did not cause sensitisation. mouse, OECD 429

Germ cell mutagenicity : Negative /OECD 471. Negative/OECD 476

Carcinogenicity : No carcinogenic effect

Reproductive toxicity : NOAEL: > = 1500 mg/kg bw/day(rat, oral, 28 days, OECD 422)

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : NOAEL: > = 1500 mg/kg bw/day(rat, OECD 422)

Aspiration hazard : Not classified

SECTION 12: Ecological information

12.1. Toxicity

| POTASSIUM NITRATE (7757-79-1) | |
|--------------------------------|--|
| LC50 fish 1 | 1378 mg/l (96h - <i>Poecilia reticulata</i> , OECD 203) |
| EC50 Daphnia 1 | 490 mg/l (48h - <i>Daphnia</i>) |
| EC50 other aquatic organisms 1 | > 1000 mg/l (3h - ACTIVATED SLUDGE, OECD 209) |
| ErC50 (algae) | > 1700 mg/l (10 d - Benthic diatoms) |
| NOEC (additional information) | ACTIVATED SLUDGE 180 mg/l OECD 209 |

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

| POTASSIUM NITRATE (7757-79-1) | |
|-------------------------------|----------------|
| Log Pow | Not applicable |
| Log Kow | Not applicable |
| Bioaccumulative potential | small. |

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

| POTASSIUM NITRATE (7757-79-1) | |
|--|--|
| This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII | |
| This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII | |

12.6. Other adverse effects

Other adverse effects : Nitrate may cause an eutrophication of natural water.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Dispose in a safe manner in accordance with local/national regulations. Dispose of this material and its container at hazardous or special waste collection point.

Ecology - waste materials : See the european waste catalogue.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

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14.1. UN number

| | |
|---------------|--------|
| UN-No. (ADR) | : 1486 |
| UN-No. (IMDG) | : 1486 |
| UN-No. (IATA) | : 1486 |
| UN-No. (ADN) | : 1486 |
| UN-No. (RID) | : 1486 |

14.2. UN proper shipping name

| | |
|---------------------------------------|--|
| Proper Shipping Name (ADR) | : POTASSIUM NITRATE |
| Proper Shipping Name (IMDG) | : POTASSIUM NITRATE |
| Proper Shipping Name (IATA) | : POTASSIUM NITRATE |
| Proper Shipping Name (ADN) | : POTASSIUM NITRATE |
| Proper Shipping Name (RID) | : POTASSIUM NITRATE |
| Transport document description (ADR) | : UN 1486 POTASSIUM NITRATE, 5.1, III, (E) |
| Transport document description (IMDG) | : UN 1486 POTASSIUM NITRATE, 5.1, III |

14.3. Transport hazard class(es)

| | |
|-----------------------------------|---|
| ADR | |
| Transport hazard class(es) (ADR) | : 5.1 |
| Danger labels (ADR) | : 5.1 |
| | :  |
| IMDG | |
| Transport hazard class(es) (IMDG) | : 5.1 |
| Danger labels (IMDG) | : 5.1 |
| | :  |
| IATA | |
| Transport hazard class(es) (IATA) | : 5.1 |
| Hazard labels (IATA) | : 5.1 |
| | :  |
| ADN | |
| Transport hazard class(es) (ADN) | : 5.1 |
| Danger labels (ADN) | : 5.1 |
| | :  |
| RID | |
| Transport hazard class(es) (RID) | : 5.1 |
| Danger labels (RID) | : 5.1 |

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14.4. Packing group

| | |
|----------------------|-------|
| Packing group (ADR) | : III |
| Packing group (IMDG) | : III |
| Packing group (IATA) | : III |
| Packing group (ADN) | : III |
| Packing group (RID) | : III |

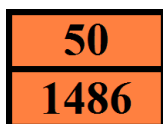
14.5. Environmental hazards

| | |
|-------------------------------|--|
| Dangerous for the environment | : No |
| Marine pollutant | : No |
| Other information | : No supplementary information available |

14.6. Special precautions for user

- Overland transport

| | |
|---|------|
| Classification code (ADR) | : O2 |
| Excepted quantities (ADR) | : E1 |
| Hazard identification number (Kemler No.) | : 50 |
| Orange plates | : |



| | |
|-------------------------------|-----|
| Tunnel restriction code (ADR) | : E |
|-------------------------------|-----|

- Transport by sea

| | |
|---------|-------|
| MFAG-No | : 140 |
|---------|-------|

- Air transport

No data available

- Inland waterway transport

| | |
|---------------------------|------|
| Carriage prohibited (ADN) | : No |
| Not subject to ADN | : No |

- Rail transport

| | |
|---------------------------|------|
| Carriage prohibited (RID) | : No |
|---------------------------|------|

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

POTASSIUM NITRATE is not on the REACH Candidate List

POTASSIUM NITRATE is not on the REACH Annex XIV List

| | |
|--|--|
| Other information, restriction and prohibition regulations | : REGULATION (EU) No 98/2013 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 15 January 2013 on the marketing and use of explosives precursors - The substance is listed. |
|--|--|

15.1.2. National regulations

SUBSTANCE LISTED IN THE ANNEX I OF DIRECTIVE 2003/105/CE AMENDING DIRECTIVE 96/82/CE (CONTROL OF MAJOR - ACCIDENT HAZARDS INVOLVING DANGEROUS SUBSTANCES)

15.2. Chemical safety assessment

A chemical safety assessment has been carried out

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SECTION 16: Other information

Abbreviations and acronyms:

ADN: European Agreement concerning international carriage of Dangerous goods by Inland waterways
ADR: European Agreement concerning international carriage of Dangerous goods by Road
AF : Assessment factor
BCF : Bioconcentration factor
Bw: Body weight
CAS: Chemical Abstracts Service
CLP : Classification, labelling, packaging
CSR: Chemical Safety Report
DMEL : Derived maximum effect level
DNEL: Derivative No effect Level
EC: European Community
ELV : Emission limit values
EN: European Norm
EUH: European Hazard Statement
EWC : European Waste catalogue
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
IMDG: International Maritime Dangerous Goods
LC50: Median lethal concentration
LD50 : Median lethal dose
NOAEL : No-observed-adverse-effect-level
NOEC : No observed effect concentration
NOEL : No observed effect level
OEL : Operator exposure level
PBT: Persistent, bioaccumulative, Toxic
PEC : Predicted effect level
PNEC: Predicted No effect Concentration
REACH : Registration, evaluation and autorisation of chemicals
RID: Regulations concerning the international carriage of dangerous goods by rail
STEL: Short Term Exposure Limit
TWA : Time weighted average
vPvB: Very persistent, very bioaccumulative

Data sources : Reach dossier.

Training advice : None.

Full text of H- and EUH-statements:

| | |
|------------|---|
| Ox. Sol. 3 | Oxidising Solids, Category 3 |
| H272 | May intensify fire; oxidiser |
| ERC8a | Wide dispersive indoor use of processing aids in open systems |
| ERC8b | Wide dispersive indoor use of reactive substances in open systems |
| ERC8c | Wide dispersive indoor use resulting in inclusion into or onto a matrix |
| ERC8d | Wide dispersive outdoor use of processing aids in open systems |
| ERC8e | Wide dispersive outdoor use of reactive substances in open systems |
| ERC8f | Wide dispersive outdoor use resulting in inclusion into or onto a matrix |
| ERC9a | Wide dispersive indoor use of substances in closed systems |
| ERC9b | Wide dispersive outdoor use of substances in closed systems |
| PC0 | ARTICLES, PYROTECHNIC |
| PC11 | Explosives |
| PC12 | Fertilizers |
| PC16 | Heat Transfer Fluids |
| PC17 | Hydraulic Fluids |
| PC35 | Washing and cleaning products (including solvent based products) |
| PC37 | Water treatment chemicals |
| PC39 | Cosmetics, personal care products |
| PC4 | Anti-Freeze and De-icing products |
| PROC10 | Roller application or brushing |
| PROC11 | Non industrial spraying |
| PROC13 | Treatment of articles by dipping and pouring |
| PROC16 | Using material as fuel sources, limited exposure to unburned product to be expected |
| PROC19 | Hand-mixing with intimate contact and only PPE available |
| PROC2 | Use in closed, continuous process with occasional controlled exposure |
| PROC26 | Handling of solid inorganic substances at ambient temperature |

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| | |
|--------|--|
| PROC5 | 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 |
| PROC8b | Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities |
| PROC9 | Transfer of substance or preparation into small containers (dedicated filling line, including weighing) |
| SU21 | Consumer uses: Private households (= general public = consumers) |
| SU22 | Professional uses: Public domain (administration, education, entertainment, services, craftsmen) |

SDS EU (REACH Annex II) (Prayon)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.
DISCLAIMER OF LIABILITY The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.

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Annex to the Safety Data Sheet

Product exposure scenario(s)

| ES Type | ES title |
|----------|--|
| Worker | Professional use: Formulation of preparations, Specific end uses |
| Consumer | Consumer use: Fertilizer & Other Products |

1. Exposure scenario ES2

Professional use: Formulation of preparations, Specific end uses

| | |
|---------------------------|---------------------------|
| ES Ref.: ES2 | Association ref code: ES2 |
| ES Type: Worker | Date of issue: 03/02/2015 |
| Version: 1.0 | |
| Revision date: 24/05/2016 | |

| | |
|--------------------------------------|--|
| Use descriptors | SU22 PROC2, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC16, PROC19, PROC26 PC4, PC12, PC16, PC17, PC37 ERC8a, ERC8b, ERC8c, ERC8d, ERC8e, ERC8f, ERC9a, ERC9b |
| Processes, tasks, activities covered | Industrial use |
| Assessment method | The substance is not classified for human health hazards or for environment effects and it is not PBT or vPvB so that no exposure assessment or risk characterisation is required. For tasks where the intervention of workers is required, the substance must be handled in accordance with good industrial hygiene and safety procedures Oxidising properties ---) Qualitative approach used to conclude safe use |

2. Operational conditions and risk management measures

2.1 Contributing scenario controlling worker exposure (PROC2, PROC5, PROC8a, PROC8b, PROC9, PROC10, PROC11, PROC13, PROC16, PROC19, PROC26)

| | |
|--------|--|
| PROC2 | Use in closed, continuous process with occasional controlled exposure |
| PROC5 | 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 |
| PROC8b | Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities |
| PROC9 | Transfer of substance or preparation into small containers (dedicated filling line, including weighing) |
| PROC10 | Roller application or brushing |
| PROC11 | Non industrial spraying |
| PROC13 | Treatment of articles by dipping and pouring |
| PROC16 | Using material as fuel sources, limited exposure to unburned product to be expected |
| PROC19 | Hand-mixing with intimate contact and only PPE available |
| PROC26 | Handling of solid inorganic substances at ambient temperature |

Product characteristics

| | |
|---------------------------------------|----------------------|
| Physical form of product | Solid, Liquid |
| Concentration of substance in product | > 25 % |
| Dustiness | Solid, low dustiness |

Operational conditions

| | |
|---|----------------|
| Frequency and duration of use | > 4 h/day |
| Other given operational conditions affecting workers exposure | indoor,outdoor |

Risk Management Measures

| | |
|--|--------------------------------------|
| Technical conditions and measures to control dispersion from source towards the worker | Good standard of general ventilation |
| | Containment as appropriate |

Other risk management measures:

| | |
|----------|--|
| Oxidizer | Handle in accordance with good industrial hygiene and safety practice. Keep away from ignition sources. Do not eat, drink or smoke when using this product. Keep away from combustible material, |
|----------|--|

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| | | |
|--|-------------------------------|--|
| | reducing agents, strong bases | |
|--|-------------------------------|--|

2.2 Contributing scenario controlling environmental exposure (ERC2, ERC4, ERC6a, ERC7)

| | |
|-------|--|
| ERC2 | Formulation of preparations |
| ERC4 | Industrial use of processing aids in processes and products, not becoming part of articles |
| ERC6a | Industrial use resulting in manufacture of another substance (use of intermediates) |
| ERC7 | Industrial use of substances in closed systems |

Product characteristics

| | |
|---------------------------------------|----------------------|
| Physical form of product | Liquid, Solid |
| Concentration of substance in product | > 25 % |
| Dustiness | Solid, low dustiness |

Operational conditions

No additional information

Risk Management Measures

No additional information

3. Exposure estimation and reference to its source

3.1. Health

| | |
|--|--|
| Information for contributing exposure scenario | |
| 2.1 | Qualitative approach used to conclude safe use |

3.2. Environment

| | |
|--|--|
| Information for contributing exposure scenario | |
| 2.2 | As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed |

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

4.1. Health

| | |
|-------------------|--|
| Guidance - Health | Where other Risk Management Measures/Operational Conditions are adopted, then users should ensure that risks are managed to at least equivalent levels |
| Website | http://guidance.echa.europa.eu/ |

4.2. Environment

Additional good practice advice beyond the REACH CSA

| | |
|---------------------------------|--|
| Additional good practice advice | Minimise number of staff exposed. Segregation of the emitting process. Effective contaminant extraction. Minimisation of manual phases. Avoid contact with contaminated tools and objects. Regular cleaning of equipment and work area. Supervision in place to check that the RMMS in place are being used correctly and OCs followed. Training staff on good practice. Good standard of personal hygiene |
|---------------------------------|--|

POTASSIUM NITRATE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

1. Exposure scenario ES3

Consumer use: Fertilizer & Other Products

| | |
|---------------------------|---------------------------|
| ES Ref.: ES3 | Association ref code: ES3 |
| ES Type: Consumer | Date of issue: 03/02/2015 |
| Version: 1.0 | |
| Revision date: 24/05/2016 | |

| | |
|--------------------------------------|--|
| Use descriptors | SU21 PC4, PC12, PC35, PC39 ERC8a, ERC8b, ERC8d, ERC8e, ERC9a, ERC9b |
| Processes, tasks, activities covered | Consumer use |
| Assessment method | The substance is not classified for human health hazards or for environment effects and it is not PBT or vPvB so that no exposure assessment or risk characterisation is required. For tasks where the intervention of workers is required, the substance must be handled in accordance with good industrial hygiene and safety procedures Oxidising properties ---) Qualitative approach used to conclude safe use |

2. Operational conditions and risk management measures

2.1 Contributing scenario consumer end-use (PC4, PC12, PC35)

| | |
|--------|--|
| PROC1 | Use in closed process, no likelihood of exposure |
| PROC2 | Use in closed, continuous process with occasional controlled exposure |
| PROC3 | Use in closed batch process (synthesis or formulation) |
| PROC4 | Use in batch and other process (synthesis) where opportunity for exposure arises |
| PROC5 | Mixing or blending in batch processes for formulation of preparations and articles (multistage and/or significant contact) |
| PROC7 | Industrial spraying |
| PROC8a | Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non dedicated facilities |
| PROC8b | Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities |
| PROC9 | Transfer of substance or preparation into small containers (dedicated filling line, including weighing) |
| PROC10 | Roller application or brushing |
| PROC13 | Treatment of articles by dipping and pouring |
| PROC14 | Production of preparations or articles by tableting, compression, extrusion, pelletisation |
| PROC15 | Use as laboratory reagent |
| PROC19 | Hand-mixing with intimate contact and only PPE available |
| PROC20 | Heat and pressure transfer fluids in dispersive use but closed systems |
| PROC22 | Potentially closed processing operations with minerals/metals at elevated temperature Industrial setting |
| PROC23 | Open processing and transfer operations with minerals/metals at elevated temperature |
| PROC26 | Handling of solid inorganic substances at ambient temperature |
| PC4 | Anti-Freeze and De-icing products |
| PC12 | Fertilizers |
| PC35 | Washing and cleaning products (including solvent based products) |

Product characteristics

| | |
|--------------------------|----------------------|
| Physical form of product | Solid, Liquid |
| Dustiness | Solid, low dustiness |

Operational conditions

| | |
|---|-----------------|
| Other given operational conditions affecting consumers exposure | outdoor, indoor |
|---|-----------------|

Risk Management Measures

| | |
|--|-------------------------------|
| Conditions and measures related to information and behavioural advice to consumers | Observe the label precautions |
|--|-------------------------------|

2.2 Contributing scenario controlling environmental exposure (ERC2, ERC4, ERC6a, ERC7)

| | |
|-------|--|
| ERC2 | Formulation of preparations |
| ERC4 | Industrial use of processing aids in processes and products, not becoming part of articles |
| ERC6a | Industrial use resulting in manufacture of another substance (use of intermediates) |
| ERC7 | Industrial use of substances in closed systems |

Product characteristics

POTASSIUM NITRATE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

| | |
|--------------------------|----------------------|
| Physical form of product | Liquid, Solid |
| Dustiness | Solid, low dustiness |

Operational conditions

No additional information

Risk Management Measures

No additional information

3. Exposure estimation and reference to its source

3.1. Health

| | |
|--|---|
| Information for contributing exposure scenario | |
| 2.1 | Qualitative approach used to conclude safe use, PC 39 : In accordance to the Article 14 (5b) of the REACH Regulation (EC) No 1907/2006, exposure estimation and risk characterisation for human health does not need to be performed for end uses in cosmetic products within the scope of Directive 76/768/EEC |

3.2. Environment

| | |
|--|--|
| Information for contributing exposure scenario | |
| 2.2 | As no environmental hazard was identified no environmental-related exposure assessment and risk characterization was performed |

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the ES

4.1. Health

4.2. Environment