



potassium dihydrogenorthophosphate

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

Date of issue: 5/9/2018 Revision date: 5/9/2018 Version: 1.0

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

1.1. Product identifier

Product form : Substance
Trade name : soluMKP
Chemical name : potassium dihydrogenorthophosphate
EC-No. : 231-913-4
CAS-No. : 7778-77-0
REACH registration No : 01-2119490224-41-XXXX

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

1.2.1. Relevant identified uses

Use of the substance/mixture : Fertilizer

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Supplier

K+S KALI GmbH
Bertha-von-Suttner-Str. 7
P.O. Box 10 20 29
34111 Kassel - Germany
T (+49) 561 9301-0 - F (+49) 561 9301-1753

Email competent person

sds@kft.de

1.4. Emergency telephone number

Emergency number : For Hazardous Materials [or Dangerous Goods] Incidents
Spill, Leak, Fire, Exposure, or Accident
Call CHEMTREC Day or Night
Within USA and Canada: 1-800-424-9300
Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

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

No labelling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name	Product identifier	%
potassium dihydrogenorthophosphate	(CAS-No.) 7778-77-0 (EC-No.) 231-913-4 (REACH-no) 01-2119490224-41-XXXX	-

3.2. Mixtures

Not applicable

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SECTION 4: First aid measures

4.1. Description of first aid measures

- | | |
|---------------------------------------|---|
| First-aid measures general | : In case of doubt or persistent symptoms, consult always a physician. |
| First-aid measures after inhalation | : When symptoms occur: go into open air and ventilate suspected area. |
| First-aid measures after skin contact | : Wash skin with plenty of water. Get medical advice if skin irritation persists. Take off contaminated clothing. |
| First-aid measures after eye contact | : Rinse eyes with water as a precaution. If eye irritation persists: Get medical advice/attention. |
| First-aid measures after ingestion | : Rinse mouth. Drink plenty of water. Do NOT induce vomiting. If you feel unwell, seek medical advice. Call a poison center or a doctor if you feel unwell. |

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

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| Symptoms/effects | : Not expected to present a significant hazard under anticipated conditions of normal use. |
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4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

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| Suitable extinguishing media | : Water spray. Foam. Dry powder. Carbon dioxide. Sand. |
| Unsuitable extinguishing media | : Strong water jet. |

5.2. Special hazards arising from the substance or mixture

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| Hazardous decomposition products in case of fire | : Toxic fumes may be released. Phosphorus oxides. Metal oxides. |
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5.3. Advice for firefighters

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| Firefighting instructions | : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment. |
| Protection during firefighting | : Do not enter fire area without proper protective equipment, including respiratory protection. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. |
| Other information | : Do not allow run-off from fire fighting to enter drains or water courses. Disposal must be done according to official regulations. |

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

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| Protective equipment | : Concerning personal protective equipment to use, see section 8. |
| Emergency procedures | : Ventilate spillage area. |
| Measures in case of dust release | : Provide adequate ventilation to minimize dust concentrations. |

6.1.2. For emergency responders

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| Protective equipment | : Do not attempt to take action without suitable protective equipment. Wear personal protective clothing (see chapter 8). For further information refer to section 8: "Exposure controls/personal protection". |
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6.2. Environmental precautions

Prevent entry to sewers and public waters.

6.3. Methods and material for containment and cleaning up

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| Methods for cleaning up | : Take up mechanically (sweeping, shovelling) and collect in suitable container for disposal. Minimize generation of dust. |
| Other information | : Disposal must be done according to official regulations. |

6.4. Reference to other sections

See Headings 7 and 8. For further information refer to section 13. Information for safe handling. See section 7. Concerning personal protective equipment to use, see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

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| Precautions for safe handling | : Ensure good ventilation of the work station. Wear personal protective equipment. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid dust formation. |
| Hygiene measures | : Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse. Do not eat, drink or smoke when using this product. Always wash hands after handling the product. |

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7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in original container. Keep container closed when not in use. Keep cool. Keep away from sources of ignition. Store in a well-ventilated place.

Information about storage in one common storage facility : Keep away from food, drink and animal feeding stuffs.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

potassium dihydrogenorthophosphate (7778-77-0)	
DNEL/DMEL (Workers)	
Long-term - systemic effects, inhalation	14.82 mg/m ³
DNEL/DMEL (General population)	
Long-term - systemic effects, oral	70 mg/kg bodyweight/day
Long-term - systemic effects, inhalation	6.35 mg/m ³

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protective equipment:

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid all unnecessary exposure.

Hand protection:

In case of repeated or prolonged contact wear gloves. EN 374. Nitrile rubber

Eye protection:

Where excessive dust may result, wear goggles. EN 166

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

Not necessary with sufficient ventilation. EN 143. Dust production: dust mask with filter type P2

Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Powder.
Colour	: white. colourless.
Odour	: No data available
Odour threshold	: No data available
pH	: 4.2 (10% Aqueous solution; 24°C)
Relative evaporation rate (butylacetate=1)	: Not applicable
Melting point	: 252.6 °C
Freezing point	: Not applicable
Boiling point	: > 450 °C Test method EU A.2
Flash point	: Not applicable
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: No data available
Vapour pressure	: Not applicable
Relative vapour density at 20 °C	: Not applicable
Relative density	: No data available

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Density	: 2.3 g/cm ³
Solubility	: Water: 208 g/l (20°C)
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.
Explosive limits	: Not applicable

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available.

10.2. Chemical stability

No additional information available.

10.3. Possibility of hazardous reactions

No dangerous reactions known.

10.4. Conditions to avoid

Moisture.

10.5. Incompatible materials

magnesium. Strong acids. Strong bases. Sodium hypochlorite.

10.6. Hazardous decomposition products

No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (dermal)	: Not classified (Based on available data, the classification criteria are not met)
Acute toxicity (inhalation)	: Not classified (Based on available data, the classification criteria are not met)

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LD50 oral rat	> 2000 mg/kg (OECD 425 method)
LD50 dermal rat	> 2000 mg/kg (OECD 402 method)
LC50 inhalation rat (Dust/Mist - mg/l/4h)	> 0.83 mg/l/4h (OECD 403 method)

Skin corrosion/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 4.2 (10% Aqueous solution; 24°C)
Serious eye damage/irritation	: Not classified (Based on available data, the classification criteria are not met) pH: 4.2 (10% Aqueous solution; 24°C)
Respiratory or skin sensitisation	: Not classified (Based on available data, the classification criteria are not met)
Germ cell mutagenicity	: Not classified (Based on available data, the classification criteria are not met)
Carcinogenicity	: Not classified (Based on available data, the classification criteria are not met)
Reproductive toxicity	: Not classified (Based on available data, the classification criteria are not met)
STOT-single exposure	: Not classified (Based on available data, the classification criteria are not met)
STOT-repeated exposure	: Not classified (Based on available data, the classification criteria are not met)
Aspiration hazard	: Not classified (Not relevant)

SECTION 12: Ecological information

12.1. Toxicity

Acute aquatic toxicity	: Not classified (Based on available data, the classification criteria are not met)
Chronic aquatic toxicity	: Not classified (Based on available data, the classification criteria are not met)

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LC50 fish 1	> 100 mg/l (96 h; Oncorhynchus mykiss (Rainbow trout); (OECD 203 method))
EC50 Daphnia 1	> 100 mg/l (48 h; Daphnia magna; (OECD 202 method))

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EC50 72h algae (1) > 100 mg/l (Desmodesmus subspicatus; (OECD 201 method))

12.2. Persistence and degradability

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Persistence and degradability Not applicable.

12.3. Bioaccumulative potential

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Log Pow Not applicable

Log Kow Not applicable

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Disposal must be done according to official regulations. European waste catalogue. Do not dispose of with domestic waste. Do not discharge into drains or the environment.

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations.

European List of Waste (LoW) code : 02 01 09 - agrochemical waste other than those mentioned in 02 01 08

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.2. UN proper shipping name				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.3. Transport hazard class(es)				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.4. Packing group				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
14.5. Environmental hazards				
Not applicable	Not applicable	Not applicable	Not applicable	Not applicable
No supplementary information available				

14.6. Special precautions for user

- Overland transport

Not applicable

- Transport by sea

Not applicable

- Air transport

Not applicable

- Inland waterway transport

Not applicable

- Rail transport

Not applicable

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

Not applicable

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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 dihydrogenorthophosphate is not on the REACH Candidate List

potassium dihydrogenorthophosphate is not on the REACH Annex XIV List

Other information, restriction and prohibition regulations : REGULATION (EC) No 2003/2003 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 13 October 2003 relating to fertilisers.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

IMDG	International Maritime Dangerous Goods
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
IATA	International Air Transport Association
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
DPD	Dangerous Preparations Directive 1999/45/EC
DSD	Dangerous Substances Directive 67/548/EEC
EC50	Median effective concentration
IARC	International Agency for Research on Cancer
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
SDS	Safety Data Sheet
STP	Sewage treatment plant
TLM	Median Tolerance Limit
vPvB	Very Persistent and Very Bioaccumulative

Data sources : Information provided by the manufacturer. ECHA (European Chemicals Agency).

Department issuing data specification sheet: : KFT Chemieservice GmbH
Im Leuschnerpark. 3 64347 Griesheim
Postfach 1451 64345 Griesheim
Germany

Phone: +49 6155-8981-400 Fax: +49 6155 8981-500
Safety Data Sheet Service: +49 6155 8981-522

Contact person : Dr. Sebastian Kitzig

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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