



## Safety Data Sheet

### Potassium sulfate

#### Section 1: Chemical Product and Company Identification

**Product Name:** Potassium sulfate

**Catalog Codes:** 493

**CAS#:** 7778-80-5

**RTECS:** TT5900000

**Synonym:** Potassium pyrosulfate

**Chemical Name:** Dipotassium sulfate

**Chemical Formula:**  $K_2SO_4$

**Contact Information:**

**Email:** [info@drm-chem.com](mailto:info@drm-chem.com)

**Address:** #7, Afshar javan Alley, Sohrevardi St, Tehran, Iran

**post code:** 1551818111

Tehran Sales: +98 21 88177760

**Order Online:** [Drm-chem.com](http://Drm-chem.com)

#### Section 2: Composition and Information on Ingredients

**Composition:**

Name	CAS #	% by Weight
Potassium sulfate	7778-80-5	>99

**Toxicological Data on Ingredients:** LD50 Oral - Rat - male and female - > 2.000 mg/kg. LD50 Dermal - Rat - male and female - > 2.000 mg/kg

#### Section 3: Hazards Identification

**Classification of the substance or mixture**

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

**Label elements**

Not a hazardous substance or mixture according to Regulation (EC) No 1272/2008.

**Other hazards**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

## Section 4: First Aid Measures

### Description of first-aid measures

#### If inhaled

After inhalation: fresh air.

#### In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

#### In case of eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

#### If swallowed

After swallowing: make victim drink water (two glasses at most). Consult doctor if feeling unwell.

#### Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 3) and/or in section 11

#### Indication of any immediate medical attention and special treatment needed

No data available

## Section 5: Fire and Explosion Data

### Extinguishing media

#### Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

#### Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

#### Special hazards arising from the substance or mixture

Sulfur oxides

Potassium oxides

Not combustible.

Ambient fire may liberate hazardous vapours.

#### Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

#### Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

## Section 6: Accidental Release Measures

### **Personal precautions, protective equipment and emergency procedures**

Advice for non-emergency personnel: Avoid inhalation of dusts. Evacuate the danger area, observe emergency procedures, consult an expert.

For personal protection see section 8.

### **Environmental precautions**

Do not let product enter drains.

### **Methods and materials for containment and cleaning up**

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

### **Reference to other sections**

For disposal see section 13.

## Section 7: Handling and Storage

### **Precautions for safe handling**

For precautions see section 3.

### **Conditions for safe storage, including any incompatibilities**

#### **Storage conditions**

Tightly closed. Dry.

#### **Storage class**

Storage class (TRGS 510): 13: Non Combustible Solids

## Section 8: Exposure Controls/Personal Protection

### **Control parameters**

### **Ingredients with workplace control parameters**

### **Exposure controls**

### **Personal protective equipment**

#### **Eye/face protection**

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

### **Skin protection**

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,11 mm

Break through time: 480 min

Material tested:KCL 741 Dermatril® L

### **Respiratory protection**

required when dusts are generated.

Our recommendations on filtering respiratory protection are based on the following standards: DIN EN 143, DIN 14387 and other accompanying standards relating to the used respiratory protection system.

Recommended Filter type: Filter type P1

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer.

These measures have to be properly documented.

### **Control of environmental exposure**

Do not let product enter drains.

## **Section 9: Physical and Chemical Properties**

### **Information on basic physical and chemical properties**

a) Appearance	Form: crystalline Color: colorless
b) Odor	No data available
c) Odor Threshold	No data available
d) pH	ca.7 at 25 °C
e) Melting point/freezing point	Melting point: 1067 °C

f) Initial boiling point and boiling range	1689 °C at 1.013 hPa
g) Flash point	Not applicable
h) Evaporation rate	No data available
i) Flammability (solid, gas)	The product is not flammable.
j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	No data available
l) Vapor density	No data available
m) Density	2,662 g/cm <sup>3</sup>
Relative density	No data available
n) Water solubility	120 g/l – soluble
o) Partition coefficient: n-octanol/water	No data available
p) Autoignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	Viscosity, kinematic: No data available Viscosity, dynamic: No data available
s) Explosive properties	No data available
t) Oxidizing properties	none

**Other safety information**

No data available

**Section 10: Stability and Reactivity Data**

**Reactivity**

No data available

**Chemical stability**

The product is chemically stable under standard ambient conditions (room temperature).

**Possibility of hazardous reactions**

Risk of explosion with:

smelt  
with  
Aluminum  
sodium  
acetylidene  
magnesium

**Conditions to avoid**

no information available

**Incompatible materials**

no information available

**Hazardous decomposition products**

In the event of fire: see section 5

**Section 11: Toxicological Information****on toxicological effects****Acute toxicity**

LD50 Oral - Rat - male and female - > 2.000 mg/kg

(OECD Test Guideline 425)

Remarks: (in analogy to similar products)

Symptoms: After uptake of large quantities: Gastrointestinal discomfort

Inhalation: No data available

LD50 Dermal - Rat - male and female - > 2.000 mg/kg

(OECD Test Guideline 402)

**Skin corrosion/irritation**

Skin - reconstructed human epidermis (RhE)

Result: No skin irritation - 5 min

(Regulation (EC) No. 440/2008, Annex, B.46)

**Serious eye damage/eye irritation**

Eyes - Rabbit

Result: No eye irritation

(OECD Test Guideline 405)

**Respiratory or skin sensitization**

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 429)

Remarks: (in analogy to similar products)

The value is given in analogy to the following substances: magnesium sulfate

#### **Germ cell mutagenicity**

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: Chinese hamster ovary cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative

#### **Carcinogenicity**

No data available

#### **Reproductive toxicity**

No data available

#### **Specific target organ toxicity - single exposure**

No data available

#### **Specific target organ toxicity - repeated exposure**

No data available

#### **Aspiration hazard**

No data available

#### **Additional Information**

Repeated dose toxicity - Rat - male and female - Oral - NOAEL (No observed adverse effect level) -  $\geq 1.500$  mg/kg - LOAEL (Lowest observed adverse effect level) -  $> 1.500$  mg/kg

RTECS: TT5900000

Gastrointestinal disturbance

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Hazardous properties cannot be excluded but are unlikely when the product is handled appropriately.

Handle in accordance with good industrial hygiene and safety practice.

## **Section 12: Ecological Information**

#### **Toxicity**

Toxicity to fish                      static test LC50 - Pimephales promelas (fathead minnow) - 680 mg/l  
- 96 h  
(US-EPA)

Toxicity to daphnia                static test LC50 - Daphnia magna (Water flea) - 720 mg/l - 48 h

and other aquatic  
invertebrates

(US-EPA)

Toxicity to algae

IC50 - Desmodesmus subspicatus (green algae) - 2.900 mg/l - 72 h  
Remarks: (IUCLID)

**Persistence and degradability**

The methods for determining biodegradability are not applicable to inorganic substances.

**Bioaccumulative potential**

No data available

**Mobility in soil**

No data available

**Results of PBT and vPvB assessment**

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

**Other adverse effects**

Discharge into the environment must be avoided.

**Section 13: Disposal Considerations**

**Waste treatment methods**

**Product**

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

**Section 14: Transport Information**

**UN number**

ADR/RID: -

IMDG: -

IATA: -

**UN proper shipping name**

ADR/RID: Not dangerous goods

IMDG: Not dangerous goods

IATA: Not dangerous goods

**Transport hazard class(es)**

ADR/RID: -

IMDG: -

IATA: -

**Packaging group**



ADR/RID: -

IMDG: -

IATA: -

**Environmental hazards**

ADR/RID: no IMDG Marine pollutant: no IATA: no

**Special precautions for user**

**Further information**

Not classified as dangerous in the meaning of transport regulations.

**Section 15: Other Regulatory Information**

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

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

**Chemical Safety Assessment**

For this product a chemical safety assessment was not carried out

**Section 16: Other Information**

**References:** Not available

**Other Special Considerations:** Not available

**Created:** 08/2022

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