

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### Potassium peroxodisulfate for analysis, ACS

Revision date: 17.08.2023

Product code: 15271

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

### 1.1. Product identifier

Potassium peroxodisulfate for analysis, ACS

REACH Registration Number: 01-2119495676-19-XXXX  
CAS No: 7727-21-1  
Index No: 016-061-00-1  
EC No: 231-781-8

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

#### Use of the substance/mixture

Laboratory chemicals

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

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

#### Uses advised against

Do not use for private purposes (household).

### 1.3. Details of the supplier of the safety data sheet

Company name: AnalytiChem GmbH  
Street: Stempelstraße 6  
Place: D-47167 Duisburg  
Telephone: 0203/5194-0  
E-mail: info@analytichem.de  
Contact person: Abteilung Produktsicherheit  
E-mail: produktsicherheit@analytichem.de  
Internet: www.analytichem.de  
Responsible Department: Abteilung Produktsicherheit  
Telefax: 0203/5194-290  
Telephone: 0203/5194-107/117

### 1.4. Emergency telephone 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)

### Further Information

No data available

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Regulation (EC) No 1272/2008

Ox. Sol. 3; H272  
Acute Tox. 4; H302  
Skin Irrit. 2; H315  
Eye Irrit. 2; H319  
Resp. Sens. 1; H334  
Skin Sens. 1; H317  
STOT SE 3; H335

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

#### Regulation (EC) No 1272/2008

Signal word: Danger

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**Pictograms:**



**Hazard statements**

- H272 May intensify fire; oxidiser.
- H302 Harmful if swallowed.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H319 Causes serious eye irritation.
- H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- H335 May cause respiratory irritation.

**Precautionary statements**

- P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.
- P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

**2.3. Other hazards**

No data available

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

**3.1. Substances**

Sum formula: K<sub>2</sub>O<sub>8</sub>S<sub>2</sub>  
Molecular weight: 270,32 g/mol

**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
7727-21-1	potassium persulphate			100 %
	231-781-8	016-061-00-1	01-2119495676-19-XXXX	
	Ox. Sol. 3, Acute Tox. 4, Skin Irrit. 2, Eye Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT SE 3; H272 H302 H315 H319 H334 H317 H335			

Full text of H and EUH statements: see section 16.

**Specific Conc. Limits, M-factors and ATE**

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
7727-21-1	231-781-8	potassium persulphate	100 %
	inhalation: LC50 = >= 2,95 mg/l (dusts or mists); dermal: LD50 = > 2000 mg/kg; oral: LD50 = 742 mg/kg		

**Further Information**

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

**SECTION 4: First aid measures**

**4.1. Description of first aid measures**

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#### General information

Self-protection of the first aider

#### After inhalation

Provide fresh air.

Call a physician immediately.

#### After contact with skin

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

Call a physician immediately.

#### After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

Remove contact lenses, if present and easy to do. Continue rinsing.

#### After ingestion

Rinse mouth immediately and drink plenty of water.

Call a physician immediately.

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

Irritant

Allergic reactions

Cough

Dyspnoea

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

No data available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

##### Unsuitable extinguishing media

no restriction

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

Non-combustible solids

Oxidizing

Hazardous combustion products

In case of fire may be liberated:

Sulphur oxides

#### 5.3. Advice for firefighters

Do not inhale explosion and combustion gases.

Avoid contact with skin, eyes and clothes.

In case of fire: Wear self-contained breathing apparatus.

#### Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Move undamaged containers from immediate hazard area if it can be done safely.

Use water spray jet to protect personnel and to cool endangered containers.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### For non-emergency personnel

Provide adequate ventilation.

Use personal protection equipment.

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Avoid contact with skin, eyes and clothes.  
Remove persons to safety.  
Emergency procedures  
Do not breathe dust/fume/gas/mist/vapours/spray.

#### For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

#### 6.2. Environmental precautions

Do not allow to enter into surface water or drains.

#### 6.3. Methods and material for containment and cleaning up

##### For containment

Cover drains.  
Prevent spread over a wide area (e.g. by containment or oil barriers).  
Collect in closed and suitable containers for disposal.  
Take up carefully when dry. Take up dust-free and set down dust-free.

##### For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

##### Other information

Provide adequate ventilation.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

#### 6.4. Reference to other sections

Safe handling: see section 7  
Personal protection equipment: see section 8  
Disposal: see section 13

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

#### Advice on safe handling

Handle and open container with care.  
Provide adequate ventilation.  
Avoid contact with skin, eyes and clothes.  
Avoid dust formation. Do not breathe dust.  
Use extractor hood (laboratory).

#### Advice on protection against fire and explosion

Keep away from combustible material.

#### Advice on general occupational hygiene

Take off contaminated clothing.  
Wash hands before breaks and after work.  
When using do not eat or drink.

#### Further information on handling

Take off contaminated clothing and wash it before reuse.  
Wash hands before breaks and after work.  
Draw up and observe skin protection programme.

### 7.2. Conditions for safe storage, including any incompatibilities

#### Requirements for storage rooms and vessels

Keep container tightly closed and dry.  
Store in a place accessible by authorized persons only.

#### Hints on joint storage

Keep away from combustible material.

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**Further information on storage conditions**

storage temperature +5°C - +30°C

**7.3. Specific end use(s)**

Laboratory chemicals

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Occupational exposure limits**

CAS No	Substance	ppm	mg/m <sup>3</sup>	fib/cm <sup>3</sup>	Category	Origin
7727-21-1	Persulphate salts, inorganic; Potassium persulphate	-	0.1		TWA (8 h)	

**DNEL/DMEL values**

CAS No	Substance	Exposure route	Effect	Value
7727-21-1	potassium persulphate			
Worker DNEL, long-term		inhalation	systemic	2,06 mg/m <sup>3</sup>
Worker DNEL, acute		inhalation	systemic	590 mg/m <sup>3</sup>
Worker DNEL, long-term		inhalation	local	2,06 mg/m <sup>3</sup>
Worker DNEL, long-term		dermal	systemic	18,2 mg/kg bw/day
Worker DNEL, acute		dermal	systemic	400 mg/kg bw/day
Worker DNEL, long-term		dermal	local	0,102 mg/cm <sup>2</sup>
Worker DNEL, acute		dermal	local	2,248 mg/cm <sup>2</sup>
Consumer DNEL, long-term		inhalation	systemic	1,03 mg/m <sup>3</sup>
Consumer DNEL, acute		inhalation	systemic	295 mg/m <sup>3</sup>
Consumer DNEL, long-term		inhalation	local	1,03 mg/m <sup>3</sup>
Consumer DNEL, acute		inhalation	local	295 mg/m <sup>3</sup>
Consumer DNEL, long-term		dermal	systemic	9,1 mg/kg bw/day
Consumer DNEL, acute		dermal	systemic	200 mg/kg bw/day
Consumer DNEL, long-term		dermal	local	0,051 mg/cm <sup>2</sup>
Consumer DNEL, acute		dermal	local	1,124 mg/cm <sup>2</sup>
Consumer DNEL, long-term		oral	systemic	9,1 mg/kg bw/day
Consumer DNEL, acute		oral	systemic	30 mg/kg bw/day

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**PNEC values**

CAS No	Substance	Value
Environmental compartment		
7727-21-1	potassium persulphate	
Freshwater		0,076 mg/l
Freshwater (intermittent releases)		0,763 mg/l
Marine water		0,011 mg/l
Freshwater sediment		0,275 mg/kg
Marine sediment		0,04 mg/kg
Micro-organisms in sewage treatment plants (STP)		3,6 mg/l
Soil		0,015 mg/kg

**8.2. Exposure controls**

**Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Suitable eye protection: goggles.

**Hand protection**

Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: [vertrieb@kcl.de](mailto:vertrieb@kcl.de) With specification (test according to EN374):

By long-term hand contact

Trade name/designation KCL 741 Dermatril® L  
Recommended material: NBR (Nitrile rubber) 0,11 mm  
Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation KCL 741 Dermatril® L  
Recommended material: NBR (Nitrile rubber) 0,11 mm  
Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. 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)).

**Skin protection**

Wear suitable protective clothing.  
Take off immediately all contaminated clothing.  
Wash hands before breaks and after work.

**Respiratory protection**

Respiratory protection necessary at: dust formation  
Filtering device with filter or ventilator filtering device of type: P2

**Environmental exposure controls**

Do not allow to enter into surface water or drains.

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**SECTION 9: Physical and chemical properties**

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

Physical state:	solid
Colour:	white
Odour:	odourless
Odour threshold:	No data available
Melting point/freezing point:	100 °C
Boiling point or initial boiling point and boiling range:	No data available
Flammability:	not determined not applicable
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	X
Auto-ignition temperature:	No data available
Decomposition temperature:	~100 °C
pH-Value (at 20 °C):	~3,2 (50 g/l)
Viscosity / kinematic:	No data available
Water solubility: (at 20 °C)	50 g/L
Solubility in other solvents	not determined
Dissolution rate:	No data available
Partition coefficient n-octanol/water:	not determined
Dispersion stability:	No data available
Vapour pressure:	No data available
Vapour pressure:	No data available
Density:	2,48 g/cm <sup>3</sup>
Relative density:	No data available
Bulk density:	~1150 kg/m <sup>3</sup>
Relative vapour density:	not determined
Particle characteristics:	No data available

**9.2. Other information**

**Information with regard to physical hazard classes**

Explosive properties	No data available
Sustaining combustion:	No data available
Self-ignition temperature	
Solid:	not determined
Gas:	not applicable
Oxidizing properties	
The product is: oxidising, Oxidising.	

**Other safety characteristics**

Evaporation rate:	not determined
Solvent separation test:	No data available
Solvent content:	No data available
Solid content:	100%
Sublimation point:	No data available
Softening point:	No data available
Pour point:	No data available

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Viscosity / dynamic:

No data available

Flow time:

No data available

**Further Information**

No data available

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

Possibility of hazardous reactions. oxidising, Oxidising.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

Metal, Heavy metals  
silver, Reducing agent  
Combustible substance, Alkali (lye)  
Acid, Water

**10.4. Conditions to avoid**

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

**10.5. Incompatible materials**

No data available

**10.6. Hazardous decomposition products**

In case of fire may be liberated:  
SECTION 5: Firefighting measures

**Further information**

No data available

**SECTION 11: Toxicological information**

**11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008**

**Toxicokinetics, metabolism and distribution**

No data available

**Acute toxicity**

Harmful if swallowed.  
Pulmonary oedema

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7727-21-1	potassium persulphate				
	oral	LD50 mg/kg 742	Rat	Study report (2001)	EPA OPPTS 870.1100
	dermal	LD50 mg/kg > 2000	Rat	Study report (1991)	EPA OPP 81-2
	inhalation (4 h) dust/mist	LC50 mg/l >= 2,95	Rat	Study report (1989)	EPA OPP 81-3

**Irritation and corrosivity**

Causes skin irritation.  
Causes serious eye irritation.

**Sensitising effects**

May cause allergy or asthma symptoms or breathing difficulties if inhaled. (potassium persulphate)  
May cause an allergic skin reaction. (potassium persulphate)



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**Carcinogenic/mutagenic/toxic effects for reproduction**

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

**STOT-single exposure**

May cause respiratory irritation. (potassium persulphate)

**STOT-repeated exposure**

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

**Aspiration hazard**

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

**Information on likely routes of exposure**

No data available

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

No data available

**Practical experience**

No data available

**11.2. Information on other hazards**

**Endocrine disrupting properties**

No data available

**Other information**

No data available

**Further information**

Irritant

Allergic reactions

Cough

Dyspnoea

**SECTION 12: Ecological information**

**12.1. Toxicity**

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h]   [d]	Species	Source	Method
7727-21-1	potassium persulphate						
	Acute fish toxicity	LC50	76,3	96 h	Oncorhynchus mykiss	Study report (1993)	other: FIFRA Guideline 72-1 of the Pesti
	Acute algae toxicity	ErC50	136 mg/l	72 h	Phaeodactylum tricorutum	Study report	OECD Guideline 201
	Acute crustacea toxicity	EC50	120 mg/l	48 h	Daphnia magna	Study report (1993)	other: FIFRA Guideline 72-2 of the Pesti

**12.2. Persistence and degradability**

No data available

**12.3. Bioaccumulative potential**

No data available

**12.4. Mobility in soil**

No data available

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

This substance does not meet the PBT/vPvB criteria of REACH, annex XIII.

No data available

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**12.6. Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

No data available

**12.7. Other adverse effects**

No data available

**Further information**

Avoid release to the environment.

Do not allow to enter into surface water or drains.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Dispose of waste according to applicable legislation.

Send to a physico-chemical treatment facility under observation of official regulations. Do not empty into drains.

Do not mix with other wastes.

**Contaminated packaging**

Handle contaminated packages in the same way as the substance itself.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

**SECTION 14: Transport information****Land transport (ADR/RID)**

<b>14.1. UN number or ID number:</b>	UN 1492
<b>14.2. UN proper shipping name:</b>	POTASSIUM PERSULPHATE
<b>14.3. Transport hazard class(es):</b>	5.1
<b>14.4. Packing group:</b>	III
Hazard label:	5.1
Classification code:	O2
Limited quantity:	5 kg
Excepted quantity:	E1
Transport category:	3
Hazard No:	50
Tunnel restriction code:	E

**Inland waterways transport (ADN)**

<b>14.1. UN number or ID number:</b>	UN 1492
<b>14.2. UN proper shipping name:</b>	POTASSIUM PERSULPHATE
<b>14.3. Transport hazard class(es):</b>	5.1
<b>14.4. Packing group:</b>	III
Hazard label:	5.1
Classification code:	O2
Limited quantity:	5 kg
Excepted quantity:	E1

**Marine transport (IMDG)**

<b>14.1. UN number or ID number:</b>	UN 1492
<b>14.2. UN proper shipping name:</b>	POTASSIUM PERSULPHATE
<b>14.3. Transport hazard class(es):</b>	5.1
<b>14.4. Packing group:</b>	III
Hazard label:	5.1
Special Provisions:	-
Limited quantity:	5 kg

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Excepted quantity: E1  
EmS: F-A, S-Q

**Air transport (ICAO-TI/IATA-DGR)**

**14.1. UN number or ID number:** UN 1492  
**14.2. UN proper shipping name:** POTASSIUM PERSULPHATE  
**14.3. Transport hazard class(es):** 5.1  
**14.4. Packing group:** III  
Hazard label: 5.1  
Special Provisions: A803  
Limited quantity Passenger: 10 kg  
Passenger LQ: Y546  
Excepted quantity: E1  
IATA-packing instructions - Passenger: 559  
IATA-max. quantity - Passenger: 25 kg  
IATA-packing instructions - Cargo: 563  
IATA-max. quantity - Cargo: 100 kg

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

**14.6. Special precautions for user**

Warning: Oxidising substances.

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

**SECTION 15: Regulatory information**

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

**EU regulatory information**

Restrictions on use (REACH, annex XVII):  
Entry 75

Information according to 2012/18/EU (SEVESO III): P8 OXIDISING LIQUIDS AND SOLIDS

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 1 - slightly hazardous to water

**15.2. Chemical safety assessment**

For this substance a chemical safety assessment has not been carried out.

**SECTION 16: Other information**

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#### Abbreviations and acronyms

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  
IATA: International Air Transport Association  
GHS: Globally Harmonized 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  
LC50: Lethal concentration, 50%  
LD50: Lethal dose, 50%  
Ox. Sol: Oxidising solid  
Acute Tox: Acute toxicity  
Skin Irrit: Skin irritation  
Eye Irrit: Eye irritation  
Resp. Sens: Respiratory sensitisation  
Skin Sens: Skin sensitisation  
STOT SE: Specific target organ toxicity - single exposure

#### Relevant H and EUH statements (number and full text)

H272	May intensify fire; oxidiser.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.

#### Further Information

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.