

## Safety Data Sheet

according to UK REACH Regulation

### Potassium peroxodisulfate solution 40 g/l for automatic TOC determination and for determination of i

Revision date: 10.01.2024

Product code: 04213

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

##### 1.1. Product identifier

Potassium peroxodisulfate solution 40 g/l for automatic TOC determination and for determination of i

UFI: 1QNC-H0PG-Q00Y-PCJ0

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

##### 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

inapplicable, this product is a mixture REACH registration number see section 3

#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

###### GB CLP Regulation

Ox. Liq. 3; H272

Resp. Sens. 1; H334

Skin Sens. 1; H317

Full text of hazard statements: see SECTION 16.

##### 2.2. Label elements

###### GB CLP Regulation

###### Hazard components for labelling

potassium persulphate

Signal word: Danger

###### Pictograms:



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#### Hazard statements

- H272 May intensify fire; oxidiser.  
H317 May cause an allergic skin reaction.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

#### Precautionary statements

- P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.  
P220 Keep away from clothing and other combustible materials.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

#### 2.3. Other hazards

No data available

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

##### Chemical characterization

Mixtures in aqueous solution

##### Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
7727-21-1	potassium persulphate			1 - < 5 %
	231-781-8	016-061-00-1	01-2119495676-19	
	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	1 - < 5 %
	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

##### General information

No data available

##### After inhalation

Provide fresh air.  
Call a physician immediately.

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#### 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

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.  
Remove contact lenses, if present and easy to do. Continue rinsing.  
Protect uninjured eye.

#### After ingestion

Rinse mouth immediately and drink plenty of water.  
Do NOT induce vomiting. Do not allow a neutralisation agent to be drunk.  
Call a physician immediately.

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

Irritant  
Allergic reactions

#### 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 liquids  
Material, oxygen-rich, Oxidising  
Hazardous combustion products  
In case of fire may be liberated:  
Sulphur oxides

### 5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.  
In case of fire and/or explosion do not breathe fumes.  
Avoid contact with skin, eyes and clothes.

#### 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.  
Avoid contact with skin, eyes and clothes.  
Remove persons to safety.  
Emergency procedures  
Consult an expert

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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.

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

##### 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

Read label before use. Handle and open container with care.

When using do not eat, drink, smoke, sniff. Use personal protection equipment.

Provide adequate ventilation. Avoid contact with skin, eyes and clothes.

Do not breathe vapour/aerosol.

#### Advice on protection against fire and explosion

Usual measures for fire prevention.

Material, oxygen-rich, Oxidising

#### Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs. Remove contaminated, saturated clothing immediately.

Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink. Avoid: aerosol or mist formation Do not breathe vapour/aerosol.

#### Further information on handling

Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary.

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

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

#### Requirements for storage rooms and vessels

Protect against: Light, Heat

#### Hints on joint storage

national regulations

#### Further information on storage conditions

Keep container tightly closed.

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

Laboratory chemicals

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### 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

##### PNEC values

CAS No	Substance	Value
7727-21-1	potassium persulphate	
Environmental compartment		
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.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

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

##### Eye/face protection

goggles

Wear eye/face protection.

##### Hand protection

Suitable examples are gloves of KCL GmbH, D-36124 Eichenzell, e-mail: [vertrieb@kcl.de](mailto:vertrieb@kcl.de) with the following specification (test according to EN 374):

By long-term hand contact

Recommended glove articles: KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Recommended glove articles: 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: aerosol or mist formation

##### Environmental exposure controls

Do not allow to enter into surface water or drains.

## SECTION 9: Physical and chemical properties

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

Physical state:	Liquid	
Colour:	colourless	
Odour:	odourless	
Odour threshold:	No data available	
Melting point/freezing point:		No data available
Boiling point or initial boiling point and boiling range:		No data available
Flammability:		No data available
Lower explosion limits:		No data available
Upper explosion limits:		No data available
Flash point:		No data available
Auto-ignition temperature:		No data available
Decomposition temperature:		No data available
pH-Value:		4,4
Viscosity / kinematic:		No data available
Water solubility:		completely miscible

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Solubility in other solvents

No data available

Dissolution rate:

No data available

Partition coefficient n-octanol/water:

No data available

Dispersion stability:

No data available

Vapour pressure:

No data available

Vapour pressure:

No data available

Density:

1,0236 g/cm<sup>3</sup>

Relative density:

No data available

Bulk density:

No data available

Relative vapour density:

No data available

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:

No data available

Gas:

No data available

Oxidizing properties

Oxidizing

##### Other safety characteristics

Evaporation rate:

No data available

Solvent separation test:

No data available

Solvent content:

0

Solid content:

0

Sublimation point:

No data available

Softening point:

No data available

Pour point:

No data available

No data available:

Viscosity / dynamic:

No data available

Flow time:

No data available

##### Further Information

No data available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Oxidising agent / oxidising

### 10.2. Chemical stability

Protect against: Light, Heat

### 10.3. Possibility of hazardous reactions

Combustible substance

### 10.4. Conditions to avoid

Light

Heat

### 10.5. Incompatible materials

No data available

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**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 GB CLP Regulation**

**Toxicokinetics, metabolism and distribution**

There are no data available on the preparation/mixture itself.

**Acute toxicity**

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

**ATEmix calculated**

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

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**

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

**Sensitising effects**

May cause allergy or asthma symptoms or breathing difficulties if inhaled. (potassium persulphate)

May cause an allergic skin reaction. (potassium persulphate)

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

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

**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.

**Aspiration hazard**

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

**Information on likely routes of exposure**

There are no data available on the preparation/mixture itself.

**Specific effects in experiment on an animal**

There are no data available on the preparation/mixture itself.

**Additional information on tests**

There are no data available on the preparation/mixture itself.

**Practical experience**

There are no data available on the preparation/mixture itself.

**11.2. Information on other hazards**



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**Endocrine disrupting properties**

There are no data available on the preparation/mixture itself.

**Other information**

There are no data available on the preparation/mixture itself.

**Further information**

There are no data available on the preparation/mixture itself.

**SECTION 12: Ecological information**

**12.1. Toxicity**

There are no data available on the mixture itself.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
7727-21-1	potassium persulphate					
	Acute fish toxicity	LC50 mg/l	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**

There are no data available on the mixture itself.

**12.3. Bioaccumulative potential**

There are no data available on the mixture itself.

**12.4. Mobility in soil**

There are no data available on the mixture itself.

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

The substances in the mixture do not meet the PBT/vPvB criteria according to UK REACH.

There are no data available on the mixture itself.

**12.6. Endocrine disrupting properties**

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

There are no data available on the mixture itself.

**12.7. Other adverse effects**

Discharge into the environment must be avoided.

**Further information**

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.

Send to a physico-chemical treatment facility under observation of official regulations.

Do not empty into drains.

**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

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to the industry and process.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

<b>14.1. UN number or ID number:</b>	UN 3216
<b>14.2. UN proper shipping name:</b>	PERSULPHATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
<b>14.3. Transport hazard class(es):</b>	5.1
<b>14.4. Packing group:</b>	III
Hazard label:	5.1
Classification code:	O1
Limited quantity:	5 L
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 3216
<b>14.2. UN proper shipping name:</b>	PERSULPHATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
<b>14.3. Transport hazard class(es):</b>	5.1
<b>14.4. Packing group:</b>	III
Hazard label:	5.1
Classification code:	O1
Limited quantity:	5 L
Excepted quantity:	E1

**Marine transport (IMDG)**

<b>14.1. UN number or ID number:</b>	UN 3216
<b>14.2. UN proper shipping name:</b>	PERSULPHATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
<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 L
Excepted quantity:	E1
EmS:	F-A, S-Q

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

<b>14.1. UN number or ID number:</b>	UN 3216
<b>14.2. UN proper shipping name:</b>	PERSULPHATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
<b>14.3. Transport hazard class(es):</b>	5.1
<b>14.4. Packing group:</b>	III
Hazard label:	5.1
Special Provisions:	A803
Limited quantity Passenger:	1 L
Passenger LQ:	Y541
Excepted quantity:	E1
IATA-packing instructions - Passenger:	551
IATA-max. quantity - Passenger:	2.5 L
IATA-packing instructions - Cargo:	555
IATA-max. quantity - Cargo:	30 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS:	No
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#### 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 3, Entry 75

###### National regulatory information

Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D):

1 - slightly hazardous to water

#### SECTION 16: Other information

##### Changes

This data sheet contains changes from the previous version in section(s): 1,9.

##### Abbreviations and acronyms

Ox. Liq: Oxidising liquids

Ox. Sol: Oxidising solids

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

##### Classification for mixtures and used evaluation method according to GB CLP Regulation

Classification	Classification procedure
Ox. Liq. 3; H272	On basis of test data
Resp. Sens. 1; H334	Calculation method
Skin Sens. 1; H317	Calculation method

##### 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.

*(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*