

Ammonium peroxodisulfate solution 15 % (m/V) pure

Revision date: 31.08.2022

Product code: 16882

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

1.1. Product identifier

Ammonium peroxodisulfate solution 15 % (m/V) pure

UFI: 7ERG-S14T-200N-293C

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:	Fa. Bernd Kraft GmbH	
Street:	Stempelstraße 6	
Place:	D-47167 Duisburg	
Telephone:	0203/5194-0	Telefax: 0203/5194-290
e-mail:	info@berndkraft.de	
Contact person:	Abteilung Produktsicherheit	Telephone: 0203/5194-107/117
e-mail:	produktsicherheit@berndkraft.de	
Internet:	www.berndkraft.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
Skin Irrit. 2; H315
Eye Irrit. 2; H319
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

ammonium persulphate

Signal word: Danger

Pictograms:



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Hazard statements

- H272 May intensify fire; oxidiser.
- 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.

Precautionary statements

- P210
- 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

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (GB CLP Regulation)			
7727-54-0	ammonium persulphate			15 - < 20 %
	231-786-5	016-060-00-6		
	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	
7727-54-0	231-786-5	ammonium persulphate	15 - < 20 %
		inhalation: LC50 = >= 2,95 mg/l (dusts or mists); dermal: LD50 = > 2000 mg/kg; oral: LD50 = 1130 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

First aider: Pay attention to self-protection!

After inhalation

Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. Medical treatment necessary.

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After contact with skin

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

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.

After ingestion

Rinse mouth immediately and drink plenty of water. Induce vomiting when the affected person is not unconscious. Medical treatment necessary.

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

Irritant
Vomiting
Gastrointestinal complaints
Circulatory collapse
Blood pressure drop
Spasms
Narcotic effects
Respiratory complaints
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
oxidising
Hazardous combustion products
In case of fire may be liberated:
Nitrogen oxides (NO_x)
Sulphur oxides

5.3. Advice for firefighters

In case of fire and/or explosion do not breathe fumes.
Avoid contact with skin, eyes and clothes.
Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

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
Consult an expert
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 dust/fume/gas/mist/vapours/spray. If handled uncovered, arrangements with local exhaust ventilation have to be used.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking.

Advice on general occupational hygiene

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.

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

Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaustion at critical locations. Keep in a cool place. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Close containers in such a way to enable internal pressure to

Safety Data Sheet

according to UK REACH Regulation

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escape (e.g. excess pressure valve).

Hints on joint storage

Keep away from combustible material.

Keep away from: Substance, organic

Further information on storage conditions

Store in a dry place.

Store in a well-ventilated place.

Protect against: Light

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

DNEL/DMEL values

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
7727-54-0	ammonium persulphate			
Worker DNEL, long-term		inhalation	systemic	2,06 mg/m ³
Worker DNEL, acute		inhalation	systemic	590 mg/m ³
Worker DNEL, long-term		inhalation	local	2,06 mg/m ³
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 ²
Worker DNEL, acute		dermal	local	2,248 mg/cm ²
Consumer DNEL, long-term		inhalation	systemic	1,03 mg/m ³
Consumer DNEL, acute		inhalation	systemic	295 mg/m ³
Consumer DNEL, long-term		inhalation	local	1,03 mg/m ³
Consumer DNEL, acute		inhalation	local	295 mg/m ³
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 ²
Consumer DNEL, acute		dermal	local	1,124 mg/cm ²
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		
7727-54-0	ammonium 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.

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

Individual protection measures, such as personal protective equipment

Eye/face protection

Suitable eye protection: goggles.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

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

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).

Skin protection

Wear suitable protective clothing. Take off immediately all contaminated clothing.

Wash hands before breaks and after work.

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Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

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	
Melting point/freezing point:		not determined
Boiling point or initial boiling point and boiling range:		No data available
Flammability		
Solid/liquid:		not applicable
Gas:		not applicable
Lower explosion limits:		not determined
Upper explosion limits:		not determined
Flash point:		No data available
Auto-ignition temperature:		No data available
Decomposition temperature:		not determined
pH-Value:		1,0
Viscosity / kinematic:		No data available
Solubility in other solvents		
not determined		
Partition coefficient n-octanol/water:		not determined
Vapour pressure:		No data available
Vapour pressure:		No data available
Density:		1,0754 g/cm ³
Bulk density:		No data available
Relative vapour density:		not determined

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 applicable
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:		0
Solid content:		not determined
Sublimation point:		No data available
Softening point:		No data available
Pour point:		No data available
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

oxidising, Oxidising.

10.2. Chemical stability

Protect against: Light

10.3. Possibility of hazardous reactions

Metal powder
Acid
Base
Combustible substance
Hydrogen peroxide
Copper
Zinc
Iron.

10.4. Conditions to avoid

Heat
Light

10.5. Incompatible materials

No data available

10.6. Hazardous decomposition products

Formation of: Oxygen.
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.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
7727-54-0	ammonium persulphate				
	oral	LD50 mg/kg	1130	Rat	Study report (1973) OECD Guideline 401
	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

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Irritation and corrosivity

Causes skin irritation.
Causes serious eye irritation.

Sensitising effects

May cause allergy or asthma symptoms or breathing difficulties if inhaled. (ammonium persulphate)
May cause an allergic skin reaction. (ammonium 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.
There are no data available on the preparation/mixture itself.

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

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 preparation/mixture itself.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
7727-54-0	ammonium 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 tricornutum	Study report (1992) 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 preparation/mixture itself.

12.3. Bioaccumulative potential

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

12.4. Mobility in soil

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

12.7. Other adverse effects

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

Further information

Do not allow to enter into surface water or drains.

Discharge into the environment must be avoided.

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

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

<u>14.1. UN number or ID number:</u>	UN 3216
<u>14.2. UN proper shipping name:</u>	PERSULPHATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
<u>14.3. Transport hazard class(es):</u>	5.1
<u>14.4. Packing group:</u>	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)

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

Marine transport (IMDG)

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14.1. UN number or ID number:	UN 3216
14.2. UN proper shipping name:	PERSULPHATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
14.3. Transport hazard class(es):	5.1
14.4. Packing group:	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)

14.1. UN number or ID number:	UN 3216
14.2. UN proper shipping name:	PERSULPHATES, INORGANIC, AQUEOUS SOLUTION, N.O.S.
14.3. Transport hazard class(es):	5.1
14.4. Packing group:	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

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 3, 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

Skin resorption/Sensitization: Causes allergic hypersensitivity reactions.

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

Safety Data Sheet

according to UK REACH Regulation

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

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%

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

Classification	Classification procedure
Ox. Liq. 3; H272	On basis of test data
Skin Irrit. 2; H315	Calculation method
Eye Irrit. 2; H319	Calculation method
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 data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)