

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Ammonium peroxodisulfate for analysis, ACS

Revision date: 11.07.2023

Product code: 20784

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

1.1. Product identifier

Ammonium peroxodisulfate for analysis, ACS

REACH Registration Number: 01-2119495973-19-XXXX
CAS No: 7727-54-0
Index No: 016-060-00-6
EC No: 231-786-5

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

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

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

P210	
P220	Keep away from clothing and other combustible materials.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P280	
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

3.1. Substances

Sum formula:	(NH ₄) ₂ S ₂ O ₈
Molecular weight:	228,19 g/mol

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
7727-54-0	ammonium persulphate			100 %
	231-786-5	016-060-00-6	01-2119495973-19-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		
7727-54-0	231-786-5	ammonium persulphate	100 %
	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

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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

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. Protect uninjured eye. 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

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 solids

Oxidising solids

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: 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.

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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
- 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

- Read label before use.
- Handle and open container with care.
- When using do not eat, drink, smoke, sniff.
- Keep container tightly closed.
- Use personal protection equipment.
- Do not breathe dust.
- Provide adequate ventilation.
- Use extractor hood (laboratory).

Advice on protection against fire and explosion

- Keep away from sources of ignition - No smoking.
- 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 immediately all contaminated clothing and wash it before reuse.

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Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. If handled uncovered, arrangements with local exhaust ventilation have to be used.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Store in a place accessible by authorized persons only.
Keep container tightly closed.
storage temperature +15°C - +25°C
Store in a dry place.

Hints on joint storage

Keep away from combustible material.
Keep away from: Substance, organic

Further information on storage conditions

Protect against:
Humidity

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 ³	fib/cm ³	Category	Origin
7727-54-0	Persulphate salts, inorganic; Ammonium persulphate	-	0.1		TWA (8 h)	

DNEL/DMEL values

CAS No	Substance	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

Wear eye/face protection.

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.

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

By long-term hand contact

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

By short-term hand contact

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

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

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

Protective clothing

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

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Draw up and observe skin protection programme.

Respiratory protection

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

Filtering device with filter or ventilator filtering device of type: P2

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:	solid
Colour:	white
Odour:	odourless
Odour threshold:	No data available
Melting point/freezing point:	120 °C
Boiling point or initial boiling point and boiling range:	No data available
Flammability:	not determined
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	>120 °C
pH-Value (at 20 °C):	3,2 (100 g/l)
Viscosity / kinematic:	No data available
Water solubility: (at 20 °C)	620 g/L
Solubility in other solvents	not determined
Partition coefficient n-octanol/water:	not determined
Vapour pressure:	No data available
Vapour pressure:	No data available
Density:	1,98 g/cm ³
Bulk density:	900 kg/m ³
Relative vapour density:	not determined

9.2. Other information

Information with regard to physical hazard classes

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:	0
Solid content:	100,00 %
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

oxidising, Oxidising.

10.2. Chemical stability

Protect from moisture.

10.3. Possibility of hazardous reactions

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

10.4. Conditions to avoid

Keep away from heat.

10.5. Incompatible materials

No data available

10.6. Hazardous decomposition products

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.

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

Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

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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

May cause respiratory irritation. (ammonium 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.
No data available

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

Irritating to respiratory system.
see also Section 4

Further information

Irritant
Vomiting
Gastrointestinal complaints
Circulatory collapse
Blood pressure drop
Spasms
Narcotic effects
Respiratory complaints
Allergic reactions

SECTION 12: Ecological information

12.1. Toxicity

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

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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

The methods for determining the biological degradability are not applicable to inorganic substances.

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.

12.6. Endocrine disrupting properties

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

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.

Dispose of waste according to "Kreislaufwirtschafts- und Abfallgesetz (KrW-/AbfG)".

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

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

Contaminated packaging

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)**

14.1. UN number or ID number:	UN 1444
14.2. UN proper shipping name:	AMMONIUM PERSULPHATE
14.3. Transport hazard class(es):	5.1
14.4. Packing group:	III
Hazard label:	5.1
Classification code:	O2
Limited quantity:	5 kg
Excepted quantity:	E1
Transport category:	3
Hazard No:	50

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Tunnel restriction code: E

Inland waterways transport (ADN)

14.1. UN number or ID number: UN 1444
14.2. UN proper shipping name: AMMONIUM PERSULPHATE
14.3. Transport hazard class(es): 5.1
14.4. Packing group: III
 Hazard label: 5.1
 Classification code: O2
 Limited quantity: 5 kg
 Excepted quantity: E1

Marine transport (IMDG)

14.1. UN number or ID number: UN 1444
14.2. UN proper shipping name: AMMONIUM PERSULPHATE
14.3. Transport hazard class(es): 5.1
14.4. Packing group: III
 Hazard label: 5.1
 Special Provisions: -
 Limited quantity: 5 kg
 Excepted quantity: E1
 EmS: F-A, S-Q

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 1444
14.2. UN proper shipping name: AMMONIUM 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

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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

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,9,12.

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.