

RheinPerChemie GmbH

79618 Rheinfelden

Date printed 07.11.2018, Revision 07.11.2018

Version 03. Supersedes version: 02

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SECTION 1: Identification of the substance/mixture and of the company/undertaking
1.1 Product identifier
Ammonium persulphate

Registration number	01-2119495973-19-0004
IUPAC	Diammonium peroxodisulphate
EU-INDEX	016-060-00-6
EINECS/ELINCS	231-786-5
CAS	7727-54-0

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

Initiator for emulsion polymerizations, oxidizing agent
Usage only in accordance with the identified usages as stipulated in the CSR/CSA.

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company	RheinPerChemie GmbH Untere Kanalstr. 3 79618 Rheinfelden / GERMANY Phone +49 (0) 7623 91-7227 Fax +49 (0) 7623 91-7673 Homepage www.rheinperchemie.com E-mail sales@RheinPerChemie.com
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Address enquiries to

Technical information	sales@RheinPerChemie.com
Safety Data Sheet	sdb@chemiebuero.de

1.4 Emergency telephone number

Company	+49 (0) 7623 91 7272 (24h)
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SECTION 2: Hazards identification
2.1 Classification of the substance or mixture [REGULATION (EC) No 1272/2008]

Ox. Sol. 3: H272 May intensify fire; oxidiser.
Acute Tox. 4: H302 Harmful if swallowed.
Eye Irrit. 2: H319 Causes serious eye irritation.
STOT SE 3: H335 May cause respiratory irritation.
Skin Irrit. 2: H315 Causes skin irritation.
Resp. Sens. 1: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin Sens. 1: H317 May cause an allergic skin reaction.

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2.2 Label elements

Hazard pictograms



The product is required to be labelled in accordance with regulation (EC) No 1272/2008 (CLP).

Signal word

DANGER

Contains:

Diammonium peroxodisulphate EU-INDEX 016-060-00-6

Hazard statements

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

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.
 P264 Wash thoroughly after handling with plenty of water.
 P270 Do not eat, drink or smoke when using this product.
 P272 Contaminated work clothing should not be allowed out of the workplace.
 P280 Wear protective gloves / protective clothing / eye protection / face protection.
 P284 In case of inadequate ventilation wear respiratory protection.
 P302+P352 IF ON SKIN: Wash with plenty of water / soap.
 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.
 P312 Call a POISON CENTER / doctor if you feel unwell.
 P332+P313 If skin irritation occurs: Get medical advice / attention.
 P362 Take off contaminated clothing.
 P501 Dispose of contents/container in accordance with local/national regulation.

2.3 Other hazards

Other hazards

Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

Product-type:

The product is a substance.

Range [%]	Substance
≥ 99.0	Diammonium peroxodisulphate
	CAS: 7727-54-0, EINECS/ELINCS: 231-786-5, EU-INDEX: 016-060-00-6, Reg-No.: 01-2119495973-19
	GHS/CLP: Ox. Sol. 3: H272 - Acute Tox. 4: H302 - Eye Irrit. 2: H319 - Skin Irrit. 2: H315 - STOT SE 3: H335 - Resp. Sens. 1: H334 - Skin Sens. 1: H317

Comment on component parts

Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
 For full text of H-statements: see SECTION 16.

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SECTION 4: First aid measures

4.1 Description of first aid measures

General information	Take off contaminated clothing and wash before reuse.
Inhalation	Ensure supply of fresh air. In the event of symptoms seek medical treatment.
Skin contact	In case of contact with skin wash off immediately with plenty of water. Consult a doctor if skin irritation persists.
Eye contact	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
Ingestion	Get medical advice. Rinse out mouth and give plenty of water to drink. Do not induce vomiting.

4.2 Most important symptoms and effects, both acute and delayed

Allergic reactions
Irritant effects
Headache
Diarrhoea
Nausea, vomiting.
Cough
Shortness of breath

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media	Product itself is non-combustible. Fire extinguishing method of surrounding areas must be considered.
Extinguishing media that must not be used	Full water jet.

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.
Sulphur oxides (SO_x).
Nitrogen oxides (NO_x).
Has a fire-promoting effect due to release of oxygen.

5.3 Advice for firefighters

Use self-contained breathing apparatus.
Wear full protective suit.
Cool containers at risk with water spray jet.
Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.
Avoid dust formation.
Use breathing apparatus if exposed to dust.
Wear suitable protective equipment. For personal protection see SECTION 8.
Remove persons to safety.

6.2 Environmental precautions

Knock down dust with water spray jet.
Retain and dispose of contaminated wash water.
Do not discharge into the drains.

6.3 Methods and material for containment and cleaning up

Take up mechanically.
Avoid raising dust.
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
Work under hood. Do not inhale substance.
Provide vacuuming if dust raised.
Avoid the formation and deposition of dust.
Avoid contact with eyes and skin. Use personal protective equipment.

The product is not combustible.
Keep away from all sources of ignition.

Do not eat, drink, smoke or take drugs at work.
Wash hands before breaks and after work.
Use barrier skin cream.
Clean skin thoroughly after work, apply skin cream.
Take off contaminated clothing and wash before reuse.

7.2 Conditions for safe storage, including any incompatibilities

Only use containers that are approved specifically for the substance/product.

Do not store with combustible materials.
Do not store together with reducing agents.
Do not store together with acids and alkalies.

Keep container tightly closed.
Store in a dry place.
Keep container in a well-ventilated place.
Protect from heat/overheating.

7.3 Specific end use(s)

See product use, SECTION 1.2

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SECTION 8: Exposure controls / personal protection**8.1 Control parameters****Ingredients with occupational exposure limits to be monitored (GB)**

not applicable

DNEL

Substance
Diammonium peroxodisulphate, CAS: 7727-54-0
Industrial, inhalative, Long-term - local effects: 2.06 mg/m ³ (AF=5).
Industrial, inhalative, Acute - systemic effects: 590 mg/m ³ (AF=5).
Industrial, dermal, Long-term - systemic effects: 18.2 mg/kg bw/d (AF=5).
Industrial, dermal, Acute - systemic effects: 400 mg/kg bw/d (AF=5).
Industrial, dermal, Long-term - local effects: 0.102 mg/cm ² (AF=5).
Industrial, dermal, Acute - local effects: 2.248 mg/cm ² (AF=5).
Industrial, inhalative, Long-term - systemic effects: 2.06 mg/m ³ (AF=5).
general population, inhalative, Long-term - systemic effects: 1.03 mg/m ³ (AF=10).
general population, inhalative, Long-term - local effects: 1.03 mg/m ³ (AF=10).
general population, oral, Acute - systemic effects: 30 mg/kg bw/d (AF=10).
general population, inhalative, Acute - local effects: 295 mg/m ³ (AF=10).
general population, dermal, Long-term - systemic effects: 9.1 mg/kg bw/d (AF=10).
general population, dermal, Acute - systemic effects: 200 mg/kg bw/d.
general population, dermal, Long-term - local effects: 0.051 mg/cm ² (AF=10).
general population, dermal, Acute - local effects: 1.124 mg/cm ² (AF=10).
general population, oral, Long-term - systemic effects: 9.1 mg/kg bw/d (AF=10).
general population, inhalative, Acute - systemic effects: 295 mg/m ³ (AF=10).

PNEC

Substance
Diammonium peroxodisulphate, CAS: 7727-54-0
soil, 0.015 mg/kg dw.
sediment (seawater), 0.04 mg/kg dw.
sediment (freshwater), 0.275 mg/kg dw.
sewage treatment plants (STP), 3.6 mg/L (AF=10).
seawater, 0.011 mg/L (AF=1 000).
freshwater, 0.0763 mg/L (AF=1 000).

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8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation. Pay attention to dust limit value (ACGHI-2011: 10 mg/m ³ particle inhalable; 3 mg/m ³ particle respirable). Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances. Generic Exposure Scenarios only in accordance with the identified usages as stipulated in the CSR/CSA.
Eye protection	Safety glasses. (EN 166:2001)
Hand protection	The details concerned are recommendations. Please contact the glove supplier for further information. > 0,11 mm, Nitrile rubber, >480 min (EN 374-1/-2/-3).
Skin protection	Impermeable protective clothing.
Other	Do not inhale dust. Avoid contact with eyes and skin. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
Respiratory protection	Respiratory protection in the case of dust formation. Short term: filter apparatus, filter P2. (DIN EN 143)
Thermal hazards	No information available.
Delimitation and monitoring of the environmental exposition	Comply with applicable environmental regulations limiting discharge to air, water and soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	solid crystalline
Color	white
Odor	odourless
Odour threshold	not applicable
pH-value	ca. 2,3 (250 g/l) (20°C)
pH-value [1%]	No information available.
Boiling point [°C]	No information available.
Flash point [°C]	not applicable
Flammability (solid, gas) [°C]	The product is not combustible.
Lower explosion limit	not applicable
Upper explosion limit	not applicable
Oxidising properties	yes
Vapour pressure/gas pressure [kPa]	not applicable
Density [g/ml]	1,98 (20°C)
Bulk density [kg/m³]	900 - 1100 (20°C)
Solubility in water	559 (20°C)
Partition coefficient [n-octanol/water]	No information available.
Viscosity	not applicable
Relative vapour density determined in air	not applicable
Evaporation speed	not applicable
Melting point [°C]	No information available.
Autoignition temperature [°C]	No information available.
Decomposition temperature [°C]	> 160

9.2 Other information

No information available.

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SECTION 10: Stability and reactivity

10.1 Reactivity

See SECTION 10.3.
Can cause or intensify fire.

10.2 Chemical stability

Stable under normal ambient conditions (ambient temperature).

10.3 Possibility of hazardous reactions

Reactions with combustible substances.
Reactions with strong acids and alkalies.
Reactions with reducing agents, heavy metals.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

No information available.

10.6 Hazardous decomposition products

Oxygen.
In the event of fire: See SECTION 5.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Substance
Diammonium peroxodisulphate, CAS: 7727-54-0
LD50, dermal, Rat (female): > 2000 mg/kg.
LD50, oral, Rat: 700-742 mg/kg.
LC50, inhalative, Rat (female): > 2950 mg/m ³ /4h.

Serious eye damage/irritation	Irritant Minimum classification
Skin corrosion/irritation	Irritant Minimum classification
Respiratory or skin sensitisation	May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. Minimum classification
Specific target organ toxicity — single exposure	May cause respiratory irritation. Minimum classification
Specific target organ toxicity — repeated exposure	Based on the available information, the classification criteria are not fulfilled.
Mutagenicity	Ames-Test, OECD 471, Salmonella typhimurium: negative. Based on the available information, the classification criteria are not fulfilled.
Reproduction toxicity	Based on the available information, the classification criteria are not fulfilled.
Carcinogenicity	Based on the available information, the classification criteria are not fulfilled.
Aspiration hazard	Based on the available information, the classification criteria are not fulfilled.
General remarks	

The toxicological data are those of the pure product.

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SECTION 12: Ecological information**12.1 Toxicity**

Substance
Diammonium peroxodisulphate, CAS: 7727-54-0
LC50, (96h), fish: 76.3 mg/L.
EC50, (48h), Daphnia magna: 120 mg/L.

12.2 Persistence and degradability

Behaviour in environment compartments	No information available.
Behaviour in sewage plant	Obtain approval of the relevant authorities before discharging into sewage treatment plants.
Biological degradability	The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

Based on all available information not to be classified as PBT or vPvB respectively.

12.6 Other adverse effects

Do not discharge product unmonitored into the environment.

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

Waste material c It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Dispose of as hazardous waste.
For recycling, consult waste disposal centres.

Waste no. (recommended)

060314

Contaminated packaging

Untaminated packaging may be taken for recycling.
Packaging that cannot be cleaned should be disposed of as for product.

Waste no. (recommended)

150110*

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SECTION 14: Transport information**14.1 UN number**

Transport by land according to ADR/RID 1444

Inland navigation (ADN) 1444

Marine transport in accordance with IMDG 1444

Air transport in accordance with IATA 1444

14.2 UN proper shipping name

Transport by land according to ADR/RID Ammonium persulphate

- Classification Code O2

- Label



- ADR LQ 5 kg

- ADR 1.1.3.6 (8.6) Transport category (tunnel restriction code) 3 (E)

Inland navigation (ADN) Ammonium persulphate

- Classification Code O2

- Label



Marine transport in accordance with IMDG Ammonium persulphate

- EMS F-A, S-Q

- Label



- IMDG LQ 5 kg

Air transport in accordance with IATA Ammonium persulphate

- Label

**14.3 Transport hazard class(es)**

Transport by land according to ADR/RID 5.1

Inland navigation (ADN) 5.1

Marine transport in accordance with IMDG 5.1

Air transport in accordance with IATA 5.1

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14.4 Packing group

Transport by land according to ADR/RID III

Inland navigation (ADN) III

Marine transport in accordance with IMDG III

Air transport in accordance with IATA III

14.5 Environmental hazards

Transport by land according to ADR/RID no

Inland navigation (ADN) no

Marine transport in accordance with IMDG no

Air transport in accordance with IATA no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code

No information available.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

EEC-REGULATIONS 1991/689 (2001/118); 2010/75; 2004/42; 648/2004; 1907/2006 (REACH); 1272/2008; 75/324/EEC (2016/2037/EC); (EU) 2015/830; (EU) 2016/131; (EU) 517/2014

TRANSPORT-REGULATIONS DOT-Classification, ADR (2017); IMDG-Code (2017, 38. Amdt.); IATA-DGR (2018).

NATIONAL REGULATIONS (GB): EH40/2005 Workplace exposure limits (Second edition, published December 2011).

- **Observe employment restrictions for people** Observe employment restrictions for young people.
Observe employment restrictions for mothers-to-be and nursing mothers.

- **VOC (2010/75/CE)** not applicable

15.2 Chemical safety assessment

For this substance a chemical safety assessment has been carried out. Assessment is available from the manufacturer. For more information on the measures of risk management can contact the manufacturer.

SECTION 16: Other information**16.1 Hazard statements (SECTION 03)**

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

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16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
 RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
 ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
 ATE = acute toxicity estimate
 CAS = Chemical Abstracts Service
 CLP = Classification, Labelling and Packaging
 DMEL = Derived Minimum Effect Level
 DNEL = Derived No Effect Level
 EC50 = Median effective concentration
 ECB = European Chemicals Bureau
 EEC = European Economic Community
 EINECS = European Inventory of Existing Commercial Chemical Substances
 ELINCS = European List of Notified Chemical Substances
 GHS = Globally Harmonized System of Classification and Labelling of Chemicals
 IATA = International Air Transport Association
 IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
 IC50 = Inhibition concentration, 50%
 IMDG = International Maritime Code for Dangerous Goods
 IUCLID = International Uniform Chemical Information Database
 LC50 = Lethal concentration, 50%
 LD50 = Median lethal dose
 LC0 = lethal concentration, 0%
 LOAEL = lowest-observed-adverse-effect level
 MARPOL = International Convention for the Prevention of Marine Pollution from Ships
 NOAEL = No Observed Adverse Effect Level
 NOEC = No Observed Effect Concentration
 PBT = Persistent, Bioaccumulative and Toxic substance
 PNEC = Predicted No-Effect Concentration
 REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
 STP = Sewage Treatment Plant
 TLV@/TWA = Threshold limit value – time-weighted average
 TLV@STEL = Threshold limit value – short-time exposure limit
 VOC = Volatile Organic Compounds
 vPvB = very Persistent and very Bioaccumulative

16.3 Other information**Classification procedure**

Ox. Sol. 3: H272 May intensify fire; oxidiser. (Minimum classification)
 Acute Tox. 4: H302 Harmful if swallowed. (Minimum classification)
 Eye Irrit. 2: H319 Causes serious eye irritation. (Minimum classification)
 STOT SE 3: H335 May cause respiratory irritation. (Minimum classification)
 Skin Irrit. 2: H315 Causes skin irritation. (Minimum classification)
 Resp. Sens. 1: H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. (Minimum classification)
 Skin Sens. 1: H317 May cause an allergic skin reaction. (Minimum classification)

Modified position

none

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