

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 05.04.2017

Version 9.10

SECTION 1. Identification of the substance/mixture and of the company/undertaking**1.1 Product identifier**

Catalogue No. 106609

Product name Sodium peroxodisulfate for analysis EMSURE®

REACH Registration Number 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.

CAS-No. 7775-27-1

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

Identified uses Reagent for analysis
For additional information on uses please refer to the Merck Chemicals portal (www.merckgroup.com).

1.3 Details of the supplier of the safety data sheet

Company Merck KGaA * 64271 Darmstadt * Germany * Phone:+49 6151 72-0

Responsible Department LS-QHC * e-mail: prodsafe@merckgroup.com

1.4 Emergency telephone number Please contact the regional company representation in your country.

SECTION 2. Hazards identification**2.1 Classification of the substance or mixture****Classification (REGULATION (EC) No 1272/2008)**

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Catalogue No. 106609
Product name Sodium peroxodisulfate for analysis EMSURE®

Oxidizing solid, Category 3, H272
Acute toxicity, Category 4, Oral, H302
Respiratory sensitisation, Category 1, H334
Skin sensitisation, Category 1, H317
Specific target organ toxicity - single exposure, Category 3, Respiratory system, H335
For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word

Danger

Hazard statements

H272 May intensify fire; oxidizer.

H302 Harmful if swallowed.

H317 May cause an allergic skin reaction.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

Precautionary statements

Prevention

P280 Wear protective gloves.

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

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Reduced labelling (≤125 ml)

Hazard pictograms



Signal word

Danger

Hazard statements

H317 May cause an allergic skin reaction.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements

P280 Wear protective gloves.

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

CAS-No. 7775-27-1

2.3 Other hazards

None known.

SECTION 3. Composition/information on ingredients

3.1 Substance

Formula	Na ₂ S ₂ O ₈	Na ₂ O ₈ S ₂ (Hill)
EC-No.	231-892-1	
Molar mass	238,11 g/mol	

Hazardous components (REGULATION (EC) No 1272/2008)

Chemical name (Concentration)

CAS-No.	Registration number	Classification
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disodium peroxodisulphate (<= 100 %)		
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7775-27-1	*)	
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Oxidizing solid, Category 3, H272

Acute toxicity, Category 4, H302

Respiratory sensitisation, Category 1, H334

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Skin sensitisation, Category 1, H317

Specific target organ toxicity - single exposure, Category 3, H335

*) 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.

For the full text of the H-Statements mentioned in this Section, see Section 16.

3.2 Mixture

Not applicable

SECTION 4. First aid measures

4.1 Description of first aid measures

General advice

First aider needs to protect himself.

After inhalation: fresh air. Call in physician.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower. Consult a physician.

After eye contact: rinse out with plenty of water. Remove contact lenses.

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

irritant effects, Allergic reactions, Cough, Shortness of breath, Headache, Nausea, Vomiting

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Firefighting measures

5.1 Extinguishing media

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Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazards arising from the substance or mixture

Not combustible.

Has a fire-promoting effect due to release of oxygen.

Risk of dust explosion.

Ambient fire may liberate hazardous vapours.

Fire may cause evolution of:

Sulphur oxides

5.3 Advice for firefighters

Special protective equipment for firefighters

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

Further information

Suppress (knock down) gases/vapours/mists with a water spray jet. Prevent fire extinguishing water from contaminating surface water or the ground water system.

SECTION 6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

6.2 Environmental precautions

Do not let product enter drains.

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6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills.

Observe possible material restrictions (see sections 7 and 10).

Take up carefully. Dispose of properly. Clean up affected area. Avoid generation of dusts.

6.4 Reference to other sections

Indications about waste treatment see section 13.

SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Observe label precautions.

Work under hood. Do not inhale substance/mixture.

Hygiene measures

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Dry.

Tightly closed. Do not store near combustible materials. Keep locked up or in an area accessible only to qualified or authorised persons.

Recommended storage temperature see product label.

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

SECTION 8. Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

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Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

Eye/face protection

Safety glasses

Hand protection

full contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

splash contact:

Glove material:	Nitrile rubber
Glove thickness:	0,11 mm
Break through time:	> 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374, for example KCL 741 Dermatril® L (full contact), KCL 741 Dermatril® L (splash contact).

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).

Other protective equipment

protective clothing

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Respiratory protection

required when dusts are generated.

Recommended Filter type: Filter P 2 (acc. to DIN 3181) for solid and liquid particles of harmful substances

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Environmental exposure controls

Do not let product enter drains.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	solid
Colour	white
Odour	odourless
Odour Threshold	Not applicable
pH	3,5 - 3,8 at 100 g/l 20 °C
Melting point	No information available.
Boiling point/boiling range	Not applicable
Flash point	does not flash
Evaporation rate	No information available.

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Flammability (solid, gas)	The product is not flammable.
Lower explosion limit	Not applicable
Upper explosion limit	Not applicable
Vapour pressure	Not applicable
Relative vapour density	No information available.
Density	1,2 g/cm ³ at 20 °C
Relative density	No information available.
Water solubility	545 g/l at 20 °C
Partition coefficient: n-octanol/water	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature	ca.180 °C
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	The substance or mixture is classified as oxidizing with the category 3.

9.2 Other data

Ignition temperature not combustible

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Bulk density ca.1.150 kg/m³

SECTION 10. Stability and reactivity

10.1 Reactivity

Oxidizing
strong oxidising agent
Risk of dust explosion.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

10.3 Possibility of hazardous reactions

Violent reactions possible with:

Reducing agents, combustible substances, Alcohols, Strong acids, Bases, Heavy metal salts

10.4 Conditions to avoid

Strong heating (decomposition).
Exposure to moisture

10.5 Incompatible materials

no information available

10.6 Hazardous decomposition products

in the event of fire: See section 5.

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SECTION 11. Toxicological information

11.1 Information on toxicological effects

Acute oral toxicity

LD50 Rat: 920 mg/kg

(IUCLID)

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

Acute inhalation toxicity

LC50 Rat: > 5,1 mg/l; 4 h

(External MSDS)

Symptoms: mucosal irritations, Cough, Shortness of breath, Possible damages:., damage of respiratory tract, After a latency period:., Lung oedema

Acute dermal toxicity

LD50 Rabbit: > 10.000 mg/kg

(External MSDS)

Skin irritation

Rabbit

Result: No irritation

(IUCLID)

Eye irritation

Rabbit

Result: No eye irritation

(IUCLID)

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Product name Sodium peroxodisulfate for analysis EMSURE®

Sensitisation

Sensitisation test: Guinea pig

Result: positive

Method: OECD Test Guideline 406

May cause an allergic skin reaction.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Germ cell mutagenicity

Genotoxicity in vitro

Ames test

Result: negative

(IUCLID)

Carcinogenicity

This information is not available.

Reproductive toxicity

This information is not available.

Teratogenicity

This information is not available.

Specific target organ toxicity - single exposure

May cause respiratory irritation.

Specific target organ toxicity - repeated exposure

This information is not available.

Aspiration hazard

This information is not available.

11.2 Further information

Systemic effects:

Nausea, Vomiting, Headache

Other dangerous properties can not be excluded.

Handle in accordance with good industrial hygiene and safety practice.

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SECTION 12. Ecological information

12.1 Toxicity

Toxicity to fish

static test LC50 *Oncorhynchus mykiss* (rainbow trout): 163 mg/l; 96 h

Analytical monitoring: yes

(ECHA)

static test NOEC *Oncorhynchus mykiss* (rainbow trout): 91,7 mg/l; 96 h

Analytical monitoring: yes

(ECHA)

Toxicity to daphnia and other aquatic invertebrates

static test EC50 *Daphnia magna* (Water flea): 133 mg/l; 48 h

Analytical monitoring: yes

(ECHA)

static test NOEC *Daphnia magna* (Water flea): 67,6 mg/l; 48 h

Analytical monitoring: yes

(ECHA)

12.2 Persistence and degradability

Biodegradability

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

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

12.6 Other adverse effects

Additional ecological information

Biological effects:

Reacts with water to form toxic decomposition products.

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Discharge into the environment must be avoided.

SECTION 13. Disposal considerations

Waste treatment methods

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

SECTION 14. Transport information

Land transport (ADR/RID)

14.1 UN number	UN 1505
14.2 Proper shipping name	SODIUM PERSULPHATE
14.3 Class	5.1
14.4 Packing group	III
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
Tunnel restriction code	E

Inland waterway transport (ADN)

Not relevant

Air transport (IATA)

14.1 UN number	UN 1505
14.2 Proper shipping name	SODIUM PERSULPHATE
14.3 Class	5.1
14.4 Packing group	III
14.5 Environmentally hazardous	--
14.6 Special precautions for user	no

Sea transport (IMDG)

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Catalogue No. 106609
Product name Sodium peroxodisulfate for analysis EMSURE®

14.1 UN number UN 1505
14.2 Proper shipping name SODIUM PERSULPHATE
14.3 Class 5.1
14.4 Packing group III
14.5 Environmentally hazardous --
14.6 Special precautions for user yes
EmS F-A S-Q
14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not relevant

SECTION 15. Regulatory information

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

EU regulations

Major Accident Hazard SEVESO III
Legislation OXIDIZING LIQUIDS AND SOLIDS
P8
Quantity 1: 50 t
Quantity 2: 200 t
Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work.
Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer not regulated

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC not regulated

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Substances of very high concern (SVHC)

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).

National legislation

Storage class 5.1B

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16. Other information

Full text of H-Statements referred to under sections 2 and 3.

H272	May intensify fire; oxidizer.
H302	Harmful if swallowed.
H317	May cause an allergic skin reaction.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.

Training advice

Provide adequate information, instruction and training for operators.

Labelling

Hazard pictograms



Signal word

Danger

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Hazard statements

H272 May intensify fire; oxidizer.

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H335 May cause respiratory irritation.

Precautionary statements

Prevention

P280 Wear protective gloves.

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

Key or legend to abbreviations and acronyms used in the safety data sheet

Used abbreviations and acronyms can be looked up at www.wikipedia.org.

Regional representation

This information is given on the authorised Safety Data Sheet for your country.

The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.