

GB Material Safety Data Sheet Ä100

According to 1907/2006/EC, Article 31
(Reviewed on 21.01.2009)

1. Product details: Trade name: Disodium peroxodisulphate

Synonym(s): Natriumpersulfat

Application of the substance / the preparation: Chemicals for various applications

Supplier: Kemo-Electronic GmbH, Leher Landstr. 20,
D-27607 Langen - Germany

E-mail: kemo-electronic@t-online.de

Emergency information:

For Germany: Beratungsstelle für Vergiftungserscheinungen Mainz

Tel.: +49 (0) 6131 / 19 24 0

2. Composition / information on ingredients

Chemical characterization: CAS No. 7775-27-1

Designation: Disodium peroxodisulphate

Identification number(s): EINECS Number: 231-892-1

3. Hazards identification



Xn Harmful
O Oxidising

Information pertaining to particular dangers for man and environment:

R 8 Contact with combustible material may cause fire.
R 22 Harmful if swallowed.
R 36/37/38 Irritating to eyes, respiratory system and skin.
R 42/43 May cause sensitisation by inhalation and skin contact.

4. First aid measures

General information: Instantly remove any clothing contaminated by the product. Take affected persons into the open air. Do not leave affected persons unsupervised. Personal protection for the person providing first aid. Symptoms of poisoning may occur after several hours. Medical observation for at least 48 hours after the accident is recommended.

After inhalation: Supply fresh air and call for doctor for safety reasons. In case of unconsciousness bring patient into stable side position for transport.

After skin contact: Instantly wash with water and soap and rinse thoroughly. Consult a doctor for safety reasons.

After eye contact: Rinse opened eye for several minutes under running water. Then consult doctor.

After swallowing: Rinse out mouth and then drink plenty of water. Do not induce vomiting! Instantly call for doctor.

5. Fire fighting measures

Suitable extinguishing agents: Water haze. Water spray jet.

For safety reasons unsuitable extinguishing agents: Water with a full water jet.

Special hazards caused by the material, its products of combustion or flue gases: Oxidising by development of oxygen. Danger of bursting. Sulphur dioxide (SO₂).

Protective equipment: Wear self-contained breathing apparatus.

Additional information: Cool endangered containers with water spray jet. Dispose of fire debris and contaminated fire fighting water in accordance with official regulations. If without risk possible, move drums with material away from dangerous area.

6. Accidental release measures

Person-related safety precautions: Ensure adequate ventilation. Avoid breathing dust. Avoid causing dust. Use breathing protection against the effects of fumes/dust/aerosol. Avoid skin and eye contact. Remove all ignition sources. Wear protective equipment. Keep unprotected persons away.

Measures for environmental protection: Do not allow to enter drainage system, surface or ground water. Damp down dust with water spray jet. Do not allow to enter drainage system, surface or ground water. Inform respective authorities in case product reaches water or sewage system.

Measures for cleaning/collecting: Ensure adequate ventilation. Collect mechanically. Send for recovery or disposal in suitable containers. Dispose of the material collected according to regulations.

7. Handling and storage

Handling: Information for safe handling: Ensure good ventilation/exhaustion at the workplace. Prevent formation of dust. Any deposit of dust which cannot be avoided must be removed regularly. Do not breathe dust. Avoid skin and eye contact. Do not replace residual quantities in storage containers. Make sure that all applicable workplace limits are observed.

7. ATTENTION:

Contaminated organic solids (like textiles/paper) may ignite without an external source of ignition (self ignition). Wash contaminated material at once with plenty of water.

Information about protection against explosions and fires: Substance / product can reduce the ignition temperature of flammable substances. Keep ignition sources away - Do not smoke. Protect against electrostatic charges. Substance/product is oxidizing when dry. Potentially explosive when mixed with organic substances. Protect from heat and direct sunlight. Keep breathing equipment ready.

Storage:

Requirements to be met by storerooms and containers: Observe all local and national regulations for storage of water polluting products.

Information about storage in one common storage facility: Store away from flammable substances. Do not store together with reducing agents, heavy-metal compounds, acids and alkalis.

Further information about storage conditions: Store in cool, dry conditions in well sealed containers. Store container in a well ventilated position. Protect from humidity and keep away from water. This product is hygroscopic. Protect from contamination.

8. Exposure controls and personal protection

Components with critical values that require monitoring at the workplace:

Observe all workplace limits for dust:

OEL total dust: 10 mg/m³

OEL respirable dust: 3 mg/m³

Personal protective equipment, general protective and hygienic

measures: Keep away from foodstuffs, beverages and food. Instantly remove any contaminated garments. Do not eat, drink or smoke while working. Do not carry cleaning cloths impregnated with the product in trouser pockets. Avoid contact with the eyes and skin. Do not breathe dust. Wash hands during breaks and at the end of the work. Use skin protection cream for preventive skin protection.

Breathing equipment: Use breathing protection in case of dust formation. If all workplace limits are observed and good ventilation is ensured, no special precautions necessary.

Recommended filter device for short term use: Filter ABEK

Protection of hands: Impervious gloves. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation. The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Check the permeability prior to each renewed use of the glove.

Material of gloves: Butyl rubber - BR. Recommended thickness of the material: ≥ 0.5 mm. The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material: Penetration time ≥ 8 hours. The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed. Protective gloves should be replaced at first signs of wear.

Eye protection: Tightly sealed safety glasses.

Body protection: Protective work clothing. Protective clothing should be selected specifically for the working place.

9. Physical and chemical properties

General Information:

Form: Solid

Colour: White

Smell: Odourless

Change in condition:

Boiling point/Boiling range: Not applicable

Melting point/Melting range: Decomposes before melting.

Flash point: Not applicable.

Inflammability (solid, gaseous): Contact with combustible material may cause fire.

Decomposition temperature: ~ 180 °C (SADT (UN-Test H. 4))

Danger of explosion: Explosive when mixed with combustible material. Explosive when mixed with combustible material.

Critical values for explosion: Oxidizing properties: oxidising

Density at 20 °C: 1,2 g/cm³

Settled apparent density: 1150 kg/m³ ~ 1200 kg/m³

Solubility in / Miscibility with water at 20 °C: ~ 545 g/l

pH-value (100 g/l) at 20 °C: 3.3 - 3.8 ~

GB 10. Stability and reactivity

Thermal decomposition / conditions to be avoided: To avoid thermal decomposition do not overheat / Sources of ignition / Electrostatic charges / Moisture.

Decomposition will begin at: ~ 180 °C (SADT)

Materials to be avoided: Strong acids / Alkaline materials / Reducing agents / Flammable materials / Heavy metal compounds.

Dangerous reactions: Danger of bursting / Reacts with flammable substances / Acts as an oxidizing agent on organic materials such as wood, paper and fats / Reacts with fabric soaked in the product (e.g. cleaning wool) / Reacts with fats and oils / Reacts with reducing agents

Dangerous products of decomposition: Sulphur oxides (SO_x), Oxygen

11. Toxicological information

Acute toxicity:

LD/LC50 values that are relevant for classification: Oral/LD50/920 mg/kg (rat). Dermal/LD50/>10000 mg/kg (rabbit). Inhalative/LC0/4 h/>5,1 mg/l (rat).

Primary irritant effect: On the skin: Irritant for skin and mucous membranes.

On the eye: Irritant effect.

Other information (about experimental toxicology): Ames test: negative.

Sensitisation: May cause sensitisation by inhalation and skin contact.

12. Ecological information

Information about elimination (persistence and degradability):

Other information: Methods for the determination of biodegradability are not applicable to inorganic substances.

Behaviour in environmental systems: Mobility and bioaccumulation potential: no data available.

Ecotoxicological effects: Aquatic toxicity: EC50/48 h 133 mg/l (water flea (daphnia magna)). EC50/72 h/116 mg/l (bacteriums). LC50/96 h/163 mg/l (fish). 771 mg/l (rainbow trout (oncorhynchus mykiss)).

General notes: Water hazard class 1 (Assessment by list): slightly hazardous for water.

13. Disposal considerations

Product:

Recommendation: Disposal must be made according to official regulations.

European waste catalogue: Waste disposal key numbers from EWC have to be assigned depending on origin and processing.

Uncleaned packagings:

Recommendation: Disposal must be made according to official regulations.

Trade name: Disodium peroxodisulphate

Recommended cleaning agent: Water

14. Transport information

Land transport ADR/RID (cross-border):

ADR/RID Class: 5.1 (O2) Oxidising substances.

Kemler Number: 50

UN-Number: 1505

Packaging group: III

Label: 5.1

Designation of goods: UN 1505 SODIUM PERSULPHATE

Limited quantities (LQ): LQ12

Transport category: 3

Tunnel restriction code: E



Maritime transport IMDG-Code:

IMDG Class: 5.1

UN Number: 1505

Label: 5.1

Packaging group: III

EMS Number: F-A, S-Q

Marine pollutant: NO

Correct technical name: SODIUM PERSULPHATE

Air transport ICAO-TI and IATA-DGR:

ICAO/IATA Class: 5.1

UN/ID Number: 1505

Label: 5.1

Packaging group: III

Correct technical name: SODIUM PERSULPHATE

Transport/Additional information: Transport by post may be prohibited or restricted.

15. Regulatory information

Designation according to EC guidelines:

Code letter and hazard designation of product:



Xn Harmful

O Oxidising

Risk phrases:

8 Contact with combustible material may cause fire.

22 Harmful if swallowed.

36/37/38 Irritating to eyes, respiratory system and skin.

42/43 May cause sensitisation by inhalation and skin contact.

Safety phrases:

22 Do not breathe dust.

24 Avoid contact with skin.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

36/37/38 Wear suitable protective clothing, glove and eye/face protection.

45 In case of accident or if you feel unwell, seek medical advice immediately (show the Safety Data Sheet if possible).

National regulations:

Information about limitation of use: Employment restrictions concerning young persons must be observed.

Water hazard class:

Water hazard class 1 (Assessment by list): slightly hazardous for water.

ID-Number: 1352

Other regulations, limitations and prohibitive regulations Observe all regulations for storage of oxidizing substances.

16. Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Recommended restriction of use: Industrial use

Department issuing MSDS:

Kemo-Electronic GmbH

Leher Landstraße 20

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Germany

Tel: 0049 4743-93380

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Sources: These data are based on information submitted by pre-suppliers.



Harmful



Oxidising



Caustic

GB Material Safety Data Sheet E100

according to 2001/58 EEC

1. Identification of substance: Product details: Trade name: Sodium hydroxide
Application of the substance / the preparation: Corrosive / developer
Supplier: Kemo-Electronic, Leher Landstr. 20, D-27607 Langen - Germany
Emergency information: For Germany: Giftinformationszentrum - Nord, Zentrum für Pharmakologie und Toxikologie der Universität Göttingen, Robert Koch Str. 40, 37075 Göttingen - Germany.
EMERGENCY CALL NUMBER: Tel.: +49 (0) 551 / 192 40

2. Composition / Data on components

CAS No.: 1310-73-2
Designation: Sodium hydroxide
Identification number(s): EINECS Number: 215-185-5
EC Number: 011-002-00-6

3. Hazards identification

Hazard designation: C Corrosive
Information pertaining to particular dangers for man and environment: R 35 Causes severe burns.



Corrosive

4. First aid measures

General information: Personal protection for the First Aider. Instantly remove any clothing soiled by the product.
After inhalation: Supply fresh air. Consult doctor if symptoms persist.
After skin contact: Instantly wash with water and soap and rinse thoroughly. Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.
After eye contact: Use eye protection. Rinse opened eye for several minutes under running water. Then consult doctor.
After swallowing: Do not induce vomiting; instantly call for medical help.
Information for doctor: The following symptoms may occur: Breathing difficulty (dyspnea) and gastric or intestinal trouble
Danger: Danger of pulmonary oedema and loss of sight.
Treatment: Monitor circulation, possible shock treatment. Possibly oxygen respiration treatment. In cases of irritation to the lungs, initial treatment with Dexametason metered aerosol.

5. Fire fighting measures

Suitable extinguishing agents: Use fire fighting measures that suit the environment. Product does not burn.
For safety reasons unsuitable extinguishing agents: Water.

6. Accidental release measures

Person-related safety precautions: Wear protective equipment. Keep unprotected persons away.
Measures for environmental protection: Do not allow to enter drainage system, surface or ground water.
Measures for cleaning/collecting: Use neutralizing agent. Dispose of contaminated material as waste according to item 13. Collect mechanically. Ensure adequate ventilation.

7. Handling and storage

Handling: Information for safe handling: Keep containers tightly sealed. Prevent formation of dust. Ensure good ventilation/exhaustion at the workplace.
Storage: Requirements to be met by storerooms and containers: Unsuitable material for container: glass or ceramic. Use polyolefine containers. Provide alkali-resistant floor. Store in cool location. Do not use light alloy containers.
Information about storage in one common storage facility: Do not store together with acids. Store away from metals. Store away from water. Do not store together with textiles.
Further information about storage conditions: This product is hygroscopic. Store under dry conditions. Protect from heat and direct sunlight.
Storage Class: 8 (VCI)
VbF-Class: canceled

8. Exposure controls and personal protection

Additional information about design of technical systems: No further data; see item 7.
Components with critical values that require monitoring at the workplace: 1310-73-2 sodium hydroxide. OES Short-term value: 2 mg/m³
Additional information: The lists that were valid during the compilation were used as basis.
Personal protective equipment, general protective and hygienic measures: Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end of the work. Do not inhale dust / smoke / mist. Avoid contact with the eyes and skin. Do not eat or drink while working.
Breathing equipment: Use breathing protection in case of insufficient ventilation Filter P2.
Protection of hands: Avoid contact with skin, check the permeability prior to each renewed use of the glove.

8. / **Material of gloves:** The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. Eg Butyl rubber BR, Nitrile rubber NBR, Natural rubber NR, Chloroprene rubber CR.
Penetration time of glove material: The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
Eye protection: Tightly sealed safety glasses.
Body protection: Alkaline resistant protective clothing.

9. Physical and chemical properties

General Information: Form: Solid, scales
Colour: White
Smell: Odourless
Change in condition: Melting point/Melting range: 319 ° C
Boiling point/Boiling range: 1390 ° C (I 1013 hPa)
Flash point: Not applicable.
Danger of explosion: Product is not explosive.
Steam pressure at 800 °C: 3.5 hPa
Density at 20 °C: 2.13 g/cm³
Solubility in / Miscibility with water at 20 °C: 1090 g/l
pH-value (100 g/l) at 20 °C: > 14

10. Stability and reactivity

Conditions to be avoided: No decomposition if used according to specifications.
Dangerous reactions: Reacts with peroxides. Strong exothermic reaction with acids. Reacts with various metals. Reacts with light alloys in the presence of moisture to form hydrogen. Heating occurs when water is added.
Dangerous products of composition: None

11. Toxicological information

Acute toxicity: LD/LC50 values that are relevant for classification: Oral/LD50 2000 mg/kg (rat).
Components Type Value Species: Oral LD Lo 500 mg/kg
Primary irritant effect: On the skin: Strong caustic effect on skin and mucous membranes.
On the eye: Strong caustic effect.
Sensitization: No sensitizing effect known.
Additional toxicological information: Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

12. Ecological information

Ecotoxicological effects: Aquatic toxicity: Fishes: golden orfe/LC 50: 189 mg/l (solution: 40g/l)
Remark: Toxic effect on fish and plankton. Harmful effect due to pH shift. Forms corrosive mixtures with water even if diluted. Does not cause biological oxygen deficit.
Remark: Neutralization possible.
General notes: Water endangerment class 1: only low water-dangerous. Must not reach sewage water or drainage ditch undiluted or unneutralized.

13. Disposal considerations

Product: Recommendation: Must be specially treated under adherence to official regulations.
European waste catalogue: 06 02 04 / Sodium- and potassium-hydroxide
Uncleaned packagings: Recommendation: Disposal must be made according to official regulations. 15 01 10.
Recommended cleaning agent: Water, if necessary with additive of cleaning agents.

14. Transport information

Land transport ADR/RID:
ADR/RID-GGVS/E Class: 8 (C6) Corrosive substances
Kemler Number: 80
UN-Number: 1823
Packaging group: II
Hazard label: 8



Corrosive

15. Other information

These statements solely describe the safety demands of the product and base according to the best of our belief on our today's knowledge. They, however, do not represent any assurance towards properties and thus are given without any obligation.