

Material Safety Data Sheet according to 91/155/EWG

Prepared: 20. April 2000
Reviewed: 20. April 2000
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1. Substance, Preparation and Company Data

Name of the preparation: **SODIUM HYDROXIDE NAOH 98,5%**
MDC article no.: 76662
Details of the manufacturer and supplier: MDC Max Daetwyler AG, Bleienbach, CH-3368
Informing department: Galvanic, Telephone: +41 62 919 37 37
Telephone number in case of emergency: Swiss Toxicological Information Centre Zurich
Telephone: +41 1 251 5151

2. Composition / Data on components

Chemical characterization:
CAS No. **Designation:**
1310-73-2 sodium hydroxide
Identification number(s):
EINECS Number: 215-185-5
EU 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.

4. First-Aid- Measures

General information: Instantly remove any clothing soiled by the product.

After inhalation: Supply fresh air; consult doctor in case of complaints. In case of unconsciousness place patient stably in side position for transportation.

After skin contact: Clean with water and soap. If possible, also wash with polyethylene glycol 400. If skin irritation continues, consult a doctor.

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

After swallowing: Rinse out mouth and then drink plenty of water. Do not induce vomiting; call for medical help immediately.

5. Fire-fighting measures

Suitable extinguish agents: Use fire fighting measures that suit the environment.

Protective equipment: Wear self-contained respiratory protective device.

6. Accidental release measures

Person-related safety precautions: Use respiratory device against the effects of fumes / dust / aerosol.



Wear protective equipment. Keep unprotected persons away.

Measures for environmental protection: Do not allow to enter / surface or ground water.

Measures for cleaning/collecting: Pick up mechanically. Use neutralizing agent.

7. Handling and storage

Handling

Information for safe handling: Prevent formation of dust. Ensure good ventilation / exhaustion at the workplace. Decant and handle the product in dust-proof units.

Informations about protection against explosions and fires: The product is not flammable

Storage

Requirements to be met by storerooms and containers: Provide alkali-resistant floor. Do not use light alloy receptacles.

Information about storage in one common storage facility: Do not store together with acids.

Further information about storage conditions: Keep receptacle tightly sealed. Protect from humidity and water. This product is hygroscopic.

Storage class:

Class according to regulation on inflammable liquids: Void

8. Exposure controls and personal protection

Additional informations about design of technical systems: No further data; see item 7.

Components with limited values that require monitoring at the workplace:

1310-73-2 Sodium hydroxide

OEL: 2mg/m³

Additional information: The lists that were valid during the creation were used as basis.

Personal protective equipment:

General protective and hygienic measures: Keep away from foodstuffs, beverages and food. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Avoid contact with eyes and skin. Do not inhale dust / smoke / mist.

Breathing equipment: Suitable respiratory protective device recommended.

Protection of hands: Alkaline resistant gloves.

Eye protection: Tightly sealed goggles.

Body protection: Alkaline resistant protective clothing.

9. Physical and chemical properties

Form: Solid in various forms

Colour: White

Odour: Odourless

Change in condition	Value/Range	unit	method
Melting point/melting range:	319°	C	DIN 51761
Boiling point/ boiling range:	1390°	C	DIN 51761
Flash point:	Not applicable		
Flammability (solid, gaseous):	Product is not inflammable		
Danger of explosion:			
Product does not present an explosion hazard.			
Vapour pressure:	at 800° C	3,5	hPa
Density:	at 20° C	2,13	g/cm ³
Bulk density:	at 20° C	ca. 1150	kg/m ³
Solubility in/ miscibility with water:	at 20° C	ca. 1260	g/l
pH-value:	(50 g/l) at 20 °C	14	

10. Stability and reactivity

Thermal decomposition/ conditions to be avoided: No decomposition if used according to specifications.

Materials to be avoided: Strong acids.

Dangerous reactions: Diluting or dissolving in water always causes rapid heating. Strong exothermic reaction with acids. Reacts with light alloys in the presence of moisture to form hydrogen. Reacts with various metals. Reacts with ammonium compounds releasing ammonia.

Dangerous products of decomposition: No dangerous decomposition products known.

11. Toxicological information

Acute toxicity:

LD/LC₅₀ values that are relevant for classification:

1310-73-2 Sodium hydroxide
Oral: LD₅₀: 2000 mg/kg (rat)

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:

1310-73-2 Sodium hydroxide
LC₅₀: (1N Lsg.) 189 mg/l (fish)
LC_{50/96h}: 10 – 100 mg/l (water-organism)

Remark: Not neutralized, the substance causes pH-shift in water and by that reason it can be dangerous for water organisms.

General notes: Water hazard class 1 (German regulation) (assessment by list): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach sewage water or drainage ditch undiluted or unneutralized. Also poisonous for fish and plankton in water bodies.



13. Disposal considerations

Product

Recommendation:



Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Uncleaned packagings

Recommendation: Packaging can be reused or recycled after cleaning.

Recommended cleaning agent: Water, if necessary with cleaning agents.

14. Transport information

Land transport ADR/RID (cross border)
ADR/RID class: 8
Item: 41b
Danger code (Kemler): 80
UN-Number: 1823
Label: 8
Designation of goods: Sodium hydroxide, solid

Maritime transport IMDG:
IMDG Class: 8
Page: 8225-1
UN-Number: 1823
Packaging group: II
EMS Number: 8-06
MFAG: 705
Propper shipping name: Sodium hydroxide, solid

Air transport ICAO-TI and IATA-DGR:
ICAO/IATA Class: 8
UN/ID Number: 1823
Packaging group: II
Propper shipping name: Sodium hydroxide, solid



15. Regulatory information

Markings according to EC guidelines:

The product has been classified and marked in accordance with EC directives/ ordinance on hazardous materials.

Code letter and hazard designation of product:



C Corrosive

Risk phrases:

R 35 Causes severe burns.

Safety phrases:

R 1/2 Keep locked up and out of the reach of children.

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

R 37/39 Wear suitable gloves and eye / face protection.

R 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)

National regulations:

Swiss regulations

BAG T Nr./BAG-EDV-NrG-2591

Class of toxicity: 3

Classification according to VbF: Void

Water hazard class Water hazard class 1 /assessment by list): Slightly hazardous for water.

16. Further information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing MSDS: Galvanotechnik
