

SAFETY DATA SHEET

According to regulations (CE) No. 1907/2006 and 2015/830



Revision date : 22/11/2016

Version 16.3

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

1.1 Product identifier

Catalogue No **908**
Product name **Sodium hydroxide solution (NaOH) = 2 N (2 mol/l)**
REACH Registration Number This product is a mixture. REACH Registration Number see section 3.

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

Identified uses Reagent for analysis

1.3 Details of the supplier of the safety data sheet

Company Laboratoires Dujardin-Salleron 37210 Noizay France Phone +33 (0)2 47 25 58 25
mail : info@dujardin-salleron.com - site : www.dujardin-salleron.com

1.4 Emergency telephone number France : INRS : +33 (0)1 45 42 59 59

SECTION 2. Hazards identification

2.1 Classification of the substance or mixture

Classification (Regulation (CE) N° 1272/2008)

Skin corrosion, Category 1A, H314

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

2.2 Label elements

Labeling (Regulation (CE) N° 1272/2008)

Hazard pictograms



Signal word

Danger

Hazard statements

H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

Precautionary statements

Prevention

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P309 + P310 IF exposed or if you feel unwell: Immediately call a POISON CENTER or doctor/physician.

2.3 Other hazards

None known.

SECTION 3. Composition/information on ingredients

Chemical nature: Aqueous solution

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

Chemical Name (Concentration):

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Sodium hydroxide (≥ 5 - $\leq 10\%$)

CAS N°	EC N°	REACH N°	Classification
1310-73-2	215-185-5	01-2119457892-27-XXXX	Skin corrosion, Category 1A, H314 Corrosive to metals, Category 1, H290

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

SECTION 4. First aid measures

4.1 Description of first aid measures

General advice: first aider needs to protect himself.

After inhalation: fresh air.

After skin contact: wash off with plenty of water. Immediately remove contaminated clothing. In case of skin reaction, consult a physician.

After eye contact: rinse out with plenty of water with the eyelid held wide open. Consult an ophthalmologist if necessary.

After swallowing: make victim drink water (two glasses at most). Consult a physician in case of faintness.

4.2 Most important symptoms and effects, both acute and delayed

Irritation and corrosion.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5. Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

Water, foam, dry powder or carbon dioxide (CO₂).

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.

Ambient fire may liberate hazardous vapors.

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

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: Do not breathe vapors, aerosols. 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 empty into drains.

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 with liquid-absorbent and neutralizing material (e.g. Trivorex® (PREVOR)). Dispose of properly.

Clean up affected area.

6.4 Additional information

Clear spills immediately.

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SECTION 7. Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Observe label precautions.

Hygiene measures

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

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Requirements for storage areas and containers: no aluminum, tin or zinc containers.

Store at +15°C to +25°C.

Keep containers tightly closed in a cool well-ventilated place.

7.3 Specific end use(s)

See exposure scenario in the Annex to this SDS.

SECTION 8. Exposure controls / personal protection

8.1 Control parameters

Components with occupational exposure limit values

Sodium hydroxide (1310-73-2)

Base	Value	Threshold limit values	Comment
Limit value for occupational exposure (VLEP France)	Time Weighted Average Threshold Limit Value	2 mg/m ³	Indicative limit values
Derived No Effect Level (DNEL)			
Worker DNEL, long term		Local effects	inhalation 1 mg/m ³
Consumer DNEL, long term		Local effects	inhalation 1 mg/m ³

Recommended control procedures

Measuring methods of workplace atmosphere must meet DIN EN 482 and DIN EN 689 standards.

8.2 Exposure controls

Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. For exposed handling, use devices equipped with a local exhaust ventilation.

See section 7.1.

Individual protection measures

Eye/face protection

Tightly fitting 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.

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Other protective equipment

Wear alkali resistant protective clothing, provided with a CE marking.

Respiratory protection

Required when vapors/aerosols are generated.

Recommended filter type: P 2.

The company 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 empty into drains.

SECTION 9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

Form	liquid.
Color	colorless.
Odor	odorless.
Odor Threshold	not applicable.
pH	14 at 20 °C
Melting point	no information available.
Boiling point/boiling range	no information available.
Flash point	no information available.
Evaporation rate	no information available.
Flammability (solid, gas)	not applicable
Lower explosion limit	no information available.
Upper explosion limit	no information available.
Vapor pressure	no information available.
Relative vapor density	no information available.
Relative density	no information available.
Water solubility	at 20°C soluble
Partition coefficient: n- octanol/water	no information available.
Auto-ignition temperature	no information available.
Decomposition temperature	no information available.
Viscosity, dynamic	no information available.
Explosive properties	not classified as explosive.
Oxidizing properties	none

9.2 Other data

Bulk density	no information available.
Refraction index	no information available.
Dissociation constant	no information available.
Surface tension	no information available.
Henry constant	no information available.
Corrosion	May be corrosive to metals.

SECTION 10. Stability and reactivity

10.1 Reactivity

See section 10.3

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10.2 Chemical stability

The product is chemically stable for 2 years under standard ambient conditions (room temperature).

10.3 Possibility of hazardous reactions

Violent reactions possible with:

Nitriles, ammonium compounds, cyanides, magnesium, organic nitro compounds, organic combustible substances, phenols, powdered alkaline earth metals, acids.

10.4 Conditions to avoid

No information available

10.5 Incompatible materials

Aluminum, zinc, tin, brass, acids

10.6 Hazardous decomposition products

Carbon monoxide (CO), carbon dioxide (CO₂), sodium oxides.

SECTION 11. Toxicological information

11.1 Information on toxicological effects

Mixture

Acute oral toxicity

If ingested, mixture causes severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.

Acute inhalation toxicity

If inhaled, mixture causes mucosal irritations, cough and shortness of breath, with risk of damage of respiratory tract.

Acute dermal toxicity

No information available.

Skin irritation

Mixture causes burns and necrosis.

Eye irritation

Mixture causes serious eye damage, with risk of necrosis and blindness.

Sensitization

No information available.

Specific target organ toxicity - single exposure

No information available.

Specific target organ toxicity - repeated exposure

No information available.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Germ cell mutagenicity

No information available.

Carcinogenicity

No information available.

Reproductive toxicity

No information available.

Teratogenicity

No information available.

Aspiration hazards

No information available.

11.2 Further information

Handle in accordance with good industrial hygiene and safety practice.

Components

sodium hydroxide

Acute oral toxicity

LD50 rat: 1350 mg/kg (IUCLID)

Skin irritation

Rabbit: Result: Causes burns. (RTECS)

Eye irritation

Rabbit: Result: Causes burns. (RTECS)

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Germ cell mutagenicity
Genotoxicity in vitro
Mutagenicity (mammal cell test): micronucleus. Result: negative (Lit.)
Ames test
Result: negative (IUCLID)
Teratogenicity
Did not show teratogenic effects in animal experiments. (Lit.)

SECTION 12. Ecological information

Mixture

12.1 Ecotoxicity

Acute (short-term) fish toxicity LC50 - EC50 - species - exposure time	No information available.
Chronic (long-term) fish toxicity LC50 - EC50 - species - exposure time	No information available.
Acute (short-term) daphnia toxicity LC50 - EC50 - species - exposure time	No information available.
Chronic (long-term) daphnia toxicity LC50 - EC50 - species - exposure time	No information available.
Acute (short-term) algae toxicity LC50 - EC50 - species - exposure time	No information available.
Chronic (long-term) algae toxicity LC50 - EC50 - species - exposure time	No information available.

12.2 Persistence and degradability - Biodegradability No information available.

12.3 Bioaccumulative potential No information available.

12.4 Mobility in soil No information available.

12.5 Results of PBT and vPvB assessment No information available.

12.6 Other adverse effects

Discharge into the environment must be avoided.

Components

sodium hydroxide

Toxicity to fish
LC50 *Oncorhynchus mykiss* (rainbow trout): 45.4 mg/l; 96 h (50% solution) (IUCLID)
Toxicity to daphnia and other aquatic invertebrates
EC50 *Daphnia magna* (Water flea): 76 mg/l; 24 h (50% solution) (External SDS)
Toxicity to bacteria
CE50 *Photobacterium phosphoreum*: 22 mg/l; 15 min (External SDS).
Biodegradability
The methods for determining biodegradability are not applicable to inorganic substances.
Bioaccumulation
Bioaccumulation is unlikely.

SECTION 13. Disposal considerations

Waste treatment methods

Waste must be disposed of in accordance with the Directive on waste 2008/98/EC and with local and national regulations. Leave chemicals in original containers. No mixing with other waste. Treat uncleaned containers like the product itself.

SECTION 14. Transport information

Land transport (ADR/RID)

14.1 UN number	1824
14.2 Proper shipping name	SODIUM HYDROXIDE SOLUTION
14.3 Class	8
14.4 Packing group	II

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14.5 Environmentally hazardous --
14.6 Special precautions for users yes
Tunnel restriction code E

Inland waterway transport (ADN)

Not relevant

Air transport (IATA)

UN number 1824
Proper shipping name SODIUM HYDROXIDE SOLUTION
Class 8
Packing group II
Environmentally hazardous --
Special precautions for users yes

Sea transport (IMDG)

UN number 1824
Proper shipping name SODIUM HYDROXIDE SOLUTION
Class 8
Packing group II
Environmentally hazardous --
Special precautions for users yes
EMS F-A S-B
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

Aquatic Class risk (WGK) WGK1 (slightly hazardous for water).
Occupational restrictions Take note of Directive 94/33/EC on the protection of young people at work and Directive 92/85/EEC on the safety and health at work of pregnant women
Substances of very high concern (SVHC) This product does not contain substances of very high concern above the respective regulatory limit (> 0.1% (w/w) Regulation (EC) N° 1907/2006 (REACH), Article 57

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.

H290 May be corrosive to metals.
H314 Causes severe skin burns and eye damage.

Training advice

Provide adequate information, instruction and training for operators.

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.

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

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ANNEX: Extract of the exposure scenario (ES n°2) of workers and environment for professional use of substance sodium hydroxide in accordance with REACH regulation (EC) No 1907/2006

1. Professional use (Reagent for analysis)

Sectors of end-use

SU 22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Chemical product category

PC 21 Laboratory chemicals

Process categories

PROC 15 Use as laboratory reagent

Environmental Release Categories

ERC 2 Formulation of preparations

ERC 6a Industrial use resulting in manufacture of another substance (use of intermediates)

ERC 6b Industrial use of reactive processing aids

2. Contributing scenarios: Operational conditions and risk management

2.1 Contributing scenario controlling environmental exposure for: ERC2, ERC6a, ERC6b

Technical conditions and measures / Organizational measures

Water Solutions with high pH-value must be neutralized before discharge.

Remarks Do not allow uncontrolled discharge of product into the environment..

2.2 Contributing scenario controlling worker exposure for: PROC15

Product characteristics

Concentration of the Substance in Mixture/Article covers the percentage of the substance in the product up to 100 %.

Physical Form (at time of use) Aqueous solution

Frequency and duration of use

Frequency of use 600 minutes / day

Frequency of use 200 days / year

Other operational conditions affecting workers exposure

Outdoor / Indoor Indoor without local exhaust ventilation (LEV)

Technical conditions and measures

Good work practice required. Ensure adequate ventilation, especially in confined areas.

Conditions and measures related to personal protection, hygiene and health evaluation

Wear suitable gloves (tested to EN374), coverall and eye protection. Breathing apparatus only if aerosol or dust is formed.

3. Exposure estimation and reference to its source

For (other) local effects risk management measures are based on qualitative risk characterization.

4. Guidance to Downstream User to evaluate whether he works inside the boundaries set by the Exposure Scenario

Please refer to the following documents: ECHA Guidance on information requirements and chemical safety assessment Chapter R.12: Use descriptor system; ECHA Guidance for downstream users; ECHA Guidance on information requirements and chemical safety assessment Part D: Exposure Scenario Building, Part E: Risk Characterisation and Part G: Extending the SDS; VCI/Cefic REACH Practical Guides on Exposure Assessment and Communications in the Supply Chain; CEFIC Guidance Specific Environmental Release Categories (SPERCs).