

Material Safety Data Sheet

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Version 1.5
Regulation (EC) No 1907/2006

1 - Product and Company Information

Product Name SODIUM HYDROXIDE SOLUTION 1 MOL/L, &
Product Number 35256
Company Sigma-Aldrich Company Ltd.
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2 - Hazards Identification

SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT
Causes burns.

3 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
SODIUM HYDROXIDE SOLUTIONS (2% =<C<5%)	1310-73-2	215-185-5	011-002-00-6

Ingredient Name	Percent	CAS #	EC no	Annex I Index Number
SODIUM HYDROXIDE	>= 2 < 5	1310-73-2	215-185-5	011-002-00-6

Symbols: C

R-Phrases: 35

Causes severe burns.

WATER	>= 95 < 98	7732-18-5	231-791-2	None
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Formula NaOH
Molecular Weight 40 AMU
Synonyms Caustic soda * Hydroxyde de sodium (French) *
Lewis-red devil lye * Natriumhydroxid (German) *
Natriumhydroxyde (Dutch) * Soda lye *
Sodio(idrossido di) (Italian) * Sodium hydrate *
Sodium hydroxide (ACGIH:OSHA) * Sodium(hydroxyde
de) (French) * White caustic

4 - First Aid Measures

AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give
artificial respiration. If breathing is difficult, give oxygen.

AFTER SKIN CONTACT

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

AFTER EYE CONTACT

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician. Do not induce vomiting.

5 - Fire Fighting Measures

EXTINGUISHING MEDIA

Suitable: Dry chemical powder.

Unsuitable: Do not use water.

SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6 - Accidental Release Measures

PERSONAL PRECAUTION PROCEDURES TO BE FOLLOWED IN CASE OF LEAK OR SPILL
Evacuate area.

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP

Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

Directions for Safe Handling: Do not breathe vapor. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure.

STORAGE

Incompatible Materials: Absorbs carbon dioxide from air.

SPECIAL REQUIREMENTS: Air sensitive.

8 - Exposure Controls / Personal Protection

ENGINEERING CONTROLS

Safety shower and eye bath. Use only in a chemical fume hood.

GENERAL HYGIENE MEASURES

Wash contaminated clothing before reuse. Discard contaminated shoes. Wash thoroughly after handling.

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.
Hand Protection: Compatible chemical-resistant gloves.
Eye Protection: Chemical safety goggles.
Special Protective Measures: Faceshield (8-inch minimum).

9 - Physical and Chemical Properties

Appearance	Physical State: Liquid	
Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	N/A	
Flash Point	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	N/A	
SG/Density	N/A	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

10 - Stability and Reactivity

STABILITY

Stable: Stable.
Conditions of Instability: Absorbs carbon dioxide from air.
Materials to Avoid: Acids, Organic materials, Chlorinated solvents, Aluminum, Phosphorus, Tin/tin oxides, Zinc.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Sodium/sodium oxides.

HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

11 - Toxicological Information

RTECS NUMBER: WB4900000

ACUTE TOXICITY

LD50
Intraperitoneal
Mouse
40 MG/KG

IRRITATION DATA

Eyes
Monkey
1 %
24H
Remarks: Severe irritation effect

Skin
Rabbit
500 mg
24H
Remarks: Severe irritation effect

Eyes
Rabbit
0.4 mg
Remarks: Mild irritation effect

Eyes
Rabbit
1 %
Remarks: Severe irritation effect

Eyes
Rabbit
0.05 mg
24H
Remarks: Severe irritation effect

Eyes
Rabbit
1 mg
24H
Remarks: Severe irritation effect

Eyes
Rabbit
1 mg
30S
Remarks: Rinsed

SIGNS AND SYMPTOMS OF EXPOSURE

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting.

ROUTE OF EXPOSURE

Skin Contact: Causes burns.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: Causes burns.
Inhalation: May be harmful if inhaled. Material is extremely

destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

CHRONIC EXPOSURE - MUTAGEN

Hamster
10 MMOL/L
Cell Type: lung
Cytogenetic analysis

Hamster
16 MMOL/L
Cell Type: ovary
Cytogenetic analysis

12 - Ecological Information

No data available.

13 - Disposal Considerations

SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

14 - Transport Information

RID/ADR

UN#: 1824
Class: 8
PG: II
Proper Shipping Name: Sodium hydroxide, solution

IMDG

UN#: 1824
Class: 8
PG: II
Proper Shipping Name: Sodium hydroxide, solution
Marine Pollutant: No
Severe Marine Pollutant: No

IATA

UN#: 1824
Class: 8
PG: II
Proper Shipping Name: Sodium hydroxide solution
Inhalation Packing Group I: No

15 - Regulatory Information

CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 011-002-00-6

INDICATION OF DANGER: C

Corrosive.

R-PHRASES: 34

Causes burns.

S-PHRASES: 26-37/39-45

In case of contact with eyes, rinse immediately with plenty of

water and seek medical advice. Wear suitable gloves and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

COUNTRY SPECIFIC INFORMATION

Germany

WGK: 1

Self-Classification

16 - Other Information

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2008 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.

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