

Material Safety Data Sheet

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Version 1.4

According to 91/155/EEC

1 - Product and Company Information

Product Name SODIUM HYDROXIDE MICROPRILLS
Product Number 06306

Company Sigma-Aldrich Pte Ltd
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Singapore 118529

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2 - Composition/Information on Ingredients

Product Name	CAS #	EC no	Annex I Index Number
SODIUM HYDROXIDE	1310-73-2	215-185-5	011-002-00-6

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

3 - Hazards Identification

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

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 immediately. Do not induce vomiting.

5 - Fire Fighting Measures

EXPLOSION DATA

Sensitivity to Mechanical Impact: Contact with aluminum, tin and zinc liberates hydrogen gas. Contact with nitromethane and other similar nitro compounds causes formation of shock-sensitive salts.

EXTINGUISHING MEDIA

Suitable: Use extinguishing media appropriate to surrounding fire conditions.
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

Sweep up, place in a bag and hold for waste disposal. Ventilate area and wash spill site after material pickup is complete.

7 - Handling and Storage

HANDLING

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

STORAGE

Conditions of Storage: Keep tightly closed. Store in a cool dry place.
Incompatible Materials: Do not allow contact with water

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.

EXPOSURE LIMITS

Country	Source	Type	Value
Poland USA	OSHA.	NDS PEL	2 mg/m ³ 0.5 MG/M ³
Poland USA	ACGIH	NDSch TLV	2 mg/m ³ 1 MG/M ³
Poland		NDSP	-

EXPOSURE LIMITS - DENMARK

Source	Type	Value
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Remarks: L	OEL	TWA	2 mg/m3
EXPOSURE LIMITS - GERMANY			
	Source	Type	Value
	TRGS 900	OEL	2 mg/m3, E
Remarks: =1=			
EXPOSURE LIMITS - NORWAY			
	Source	Type	Value
		OEL	2 mg/m3
Remarks: T			
EXPOSURE LIMITS - SWEDEN			
	Source	Type	Value
		CLV (Ceili	2 mg/m3
EXPOSURE LIMITS - SWITZERLAND			
	Source	Type	Value
	OEL	OEL	2 mg/m3
Remarks: E C			
EXPOSURE LIMITS - UNITED KINGDOM			
	Source	Type	Value
	OEL	STEL	2 mg/m3

PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.
 Hand Protection: Compatible chemical-resistant gloves.
 Eye Protection: Chemical safety goggles.

9 - Physical and Chemical Properties

Appearance	Physical State: Solid	
	Color: White	
	Form: Pellets	
Property	Value	At Temperature or Pressure
pH	13 - 14	
BP/BP Range	1,390 °C	
MP/MP Range	318 °C	
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	< 18 mmHg	20 °C
SG/Density	2.13 g/cm3	
Partition Coefficient	N/A	
Viscosity	N/A	
Vapor Density	> 1 g/l	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	2.13 kg/l	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	

10 - Stability and Reactivity

STABILITY

Stable: Stable.

Conditions of Instability: Absorbs carbon dioxide from air. Heat of solution is very high, and with limited amounts of water, violent boiling may occur. Never add water to this material, always add this material to water.

Conditions to Avoid: Do not allow water to enter container because of violent reaction.

Materials to Avoid: Strong oxidizing agents, Strong acids, Organic materials.

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

Skin
Rabbit
500 mg
24 HR

Remarks: Severe irritation effect

Eyes
Rabbit
0.5 mg
24 HR

Remarks: Severe irritation effect

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

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. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

ROUTE OF EXPOSURE

Skin Contact: Causes burns.
Skin Absorption: May be harmful if absorbed through the skin.
Eye Contact: Causes burns.
Inhalation: Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract. May be harmful if inhaled.
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. Observe all federal, state, and local

environmental regulations.

14 - Transport Information

RID/ADR

UN#: 1823
Class: 8
PG: II
Proper Shipping Name: Sodium hydroxide, solid

IMDG

UN#: 1823
Class: 8
PG: II
Proper Shipping Name: Sodium hydroxide, solid
Marine Pollutant: No
Severe Marine Pollutant: No

IATA

UN#: 1823
Class: 8
PG: II
Proper Shipping Name: Sodium hydroxide, solid
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: 35

Causes severe 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

SWITZERLAND

SWISS POISON CLASS: 2

NORWAY

Declaration Number: 67084

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

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