

Material Safety Data Sheet (MSDS)

Company Details:

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SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Sodium Hydroxide Solution 1N (1.00M)**

Chemical Formula: NaOH

Common Names: Caustic Soda Solution, Lye Solution

SECTION 2: HAZARDS IDENTIFICATION

2.1. GHS classification of the substance/mixture and any national or regional information

Classification according to the United Nations GHS

Skin corrosion/irritation, Category 2 H315

Serious eye damage/eye irritation, Category 1 H318

Full text of H-statements: see section 16

Adverse physicochemical, human health and

environmental effects : Causes skin irritation, Causes serious eye damage.

2.2. GHS label elements, including precautionary statements

Labelling according to the United Nations GHS

Hazard pictograms (GHS ZA)



Signal word (GHS-ZA) : Danger

Hazardous ingredients :	SODIUM HYDROXIDE
Hazard statements (GHS ZA) :	H315 - Causes skin irritation H318 - Causes serious eye damage
Precautionary statements (GHS ZA) :	P264 - Wash skin thoroughly after handling. P280 - Wear gloves/protective clothing/eye protection/face protection. P302+P352 - IF ON SKIN: Wash with plenty of soap and water P305+P354+P338 - IF IN EYES: Immediately rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P317 - Get medical help.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to the United Nations GHS
SODIUM HYDROXIDE	CAS-No.: 1310-73-2	3-5	Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314

SECTION 4: FIRST AID MEASURES

In case of Inhalation:

Move to fresh air immediately. If breathing is difficult, give oxygen. Seek medical attention.

In case of Skin Contact:

Rinse with water for at least 15 minutes. Remove contaminated clothing. Seek medical attention.

In case of Eye Contact:

Rinse cautiously with water for at least 15 minutes. Remove contact lenses if present. Seek immediate medical attention.

In case of Ingestion:

Do NOT induce vomiting. Rinse mouth and drink plenty of water. Seek medical attention immediately.

SECTION 5: FIRE-FIGHTING MEASURES**5.1. Suitable (and unsuitable) extinguishing media**

Suitable extinguishing media: Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire: Toxic fumes may be released.

5.3. Special protective actions for fire-fighters

Protection during firefighting: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: ACCIDENTAL RELEASE MEASURES**6.1. Personal precautions, protective equipment and emergency procedures****6.1.1. For non-emergency personnel**

Emergency procedures: Ventilate spillage area. Avoid contact with skin and eyes.

6.1.2. For emergency responders

Protective equipment: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and materials for containment and cleaning up

Methods for cleaning up: Take up liquid spill into absorbent material.

Other information: Dispose of materials or solid residues at an authorized site.

SECTION 7: HANDLING AND STORAGE**Handling:**

Avoid contact with skin, eyes, and clothing. Use in a well-ventilated area. Do not breathe mist or vapors.

Storage:

Store in a cool, dry, well-ventilated area. Keep container tightly closed. Store away from acids and moisture.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

No additional information available

8.2. Appropriate engineering controls

Appropriate engineering controls: Ensure good ventilation of the work station.

Environmental exposure controls: Avoid release to the environment.

8.3. Individual protection measures, such as personal protective equipment

Hand protection: Protective gloves

Eye protection: Safety glasses

Skin and body protection: Wear suitable protective clothing

Respiratory protection: In case of insufficient ventilation, wear suitable respiratory equipment

Personal protective equipment symbol(s)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Basic physical and chemical properties

Physical state:	Liquid
Appearance:	Liquid.
Colour:	Colourless.
Odour:	Odourless.
Odour threshold:	No data available
pH:	No data available
pH solution:	No data available
Relative evaporation rate (butylacetate=1):	No data available
Relative evaporation rate (ether=1):	No data available
Melting point:	Not applicable
Freezing point:	No data available
Boiling point:	No data available
Flash point:	No data available
Auto-ignition temperature:	No data available
Decomposition temperature:	No data available
Flammability:	Non flammable.
Vapour pressure:	No data available

Vapour pressure at 50°C:	No data available
Relative vapour density at 20°C :	No data available
Relative density:	No data available
Relative density of saturated gas/air mixture :	No data available
Density:	No data available
Relative gas density:	No data available
Solubility:	Miscible with water.
Partition coefficient n-octanol/water (Log Pow) :	No data available
Partition coefficient n-octanol/water (Log Kow):	No data available
Viscosity, kinematic:	No data available
Viscosity, dynamic:	No data available
Explosive properties:	No data available
Oxidising properties:	No data available
Explosive limits:	No data available
Lower explosion limit :	No data available
Upper explosion limit:	No data available
Physical state:	Liquid
Appearance:	Liquid.

9.2. Data relevant with regard to physical hazard classes (supplemental)

No additional information available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical Stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity: Corrosive to skin and eyes. Harmful if inhaled or ingested.

Chronic Effects: Prolonged exposure may cause respiratory irritation or skin sensitization.

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - general : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment.

Hazardous to the aquatic environment, short-term (acute): Not classified

Hazardous to the aquatic environment, long-term:
(chronic) Not classified

SECTION 13: DISPOSAL CONSIDERATIONS

Disposal Method: Dispose of in accordance with local, state, and federal regulations. Neutralize with a weak acid before disposal.

SECTION 14: TRANSPORT INFORMATION

In accordance with SANS / IMDG / IATA

UN Number: UN1824

Shipping Name: Sodium Hydroxide Solution

Hazard Class: 8 (Corrosive)

Packing Group: III

14.1. Special precautions for user

SANS

Special provisions (SANS) : 223

Limited quantities (SANS) : 5 L

Limited quantities (SANS) : 5 L

Packagings, large packagings and IBCs Packing : P001, IBC03, LP01
instructions (SANS)

Portable tank and bulk containers instructions : T4
(SANS)

Portable tank and bulk container special provisions : TP1
(SANS)

IMDG

Special provisions (IMDG) : 223

Limited quantities (IMDG) : 5 L

Excepted quantities (IMDG) : E1

Packing instructions (IMDG)	: P001, LP01
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T4
Tank special provisions (IMDG)	: TP1
EmS-No. (Fire)	: F-A - FIRE SCHEDULE Alfa - GENERAL FIRE SCHEDULE
EmS-No. (Spillage)	: S-B - SPILLAGE SCHEDULE Bravo - CORROSIVE SUBSTANCES
Stowage category (IMDG)	: A
Segregation (IMDG)	: SGG18, SG35
Properties and observations (IMDG)	: Colourless liquid. Colourless liquid. Reacts with ammonium salts, evolving ammonia gas. Causes burns to skin, eyes and mucous membranes. Reacts violently with acids.

IATA

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y841
PCA limited quantity max net quantity (IATA)	: 1L
PCA packing instructions (IATA)	: 852
PCA max net quantity (IATA)	: 5L
CAO packing instructions (IATA)	: 856
CAO max net quantity (IATA)	: 60L
Special provisions (IATA)	: A3, A803
ERG code (IATA)	: 8L

SECTION 15: REGULATORY INFORMATION

Regulatory Status: Listed on TSCA, DSL, EINECS, and other chemical inventories.

SECTION 16: OTHER INFORMATION

Disclaimer for Warranties:

The information provided in this Material Safety Data Sheet (MSDS) is based on current knowledge and is intended to describe the product for safe handling, use, and disposal. Element Four Enterprise Pty Ltd makes no warranties, expressed or implied, regarding the accuracy, completeness, or suitability of this information for any particular purpose. The user is responsible for ensuring compliance with all applicable laws and regulations. Element Four Enterprise Pty Ltd shall not be held liable for any damages resulting from the use or misuse of this product or the information contained herein