



### SECTION 1 – Chemical Product and Company Identification

#### 1.1 Product Identifiers

Product Name : Sodium Hydroxide 25% Solution  
 CAS# : 1310-73-2  
 EC# : 215-185-5  
 REACH# : 01-2119457892-27-0273

#### 1.2 Recommended Use of the Chemical and Restrictions of Use

Chemical manufacturing

#### 1.3 Supplier Details

**Supplier** : BioSpectra, Inc.  
 100 Majestic Way  
 Bangor, PA 18013  
 T: 610-599-3400  
[ra@biospecta.us](mailto:ra@biospecta.us)

#### 1.4 Emergency Numbers

Emergency Numbers : US & Canada: 1-800-424-9300  
 : Outside the US & Canada: +1 703-527-3887

### SECTION 2 – Hazards Identification

#### 2.1 Classification of the Substance or Mixture

##### HCS Classification in accordance with 29 CFR 1910.1200

Skin Irritation : Category 1A  
 Eye Irritation : Category 1  
 Aquatic Toxicity : Category 3

#### 2.2 GHS Label Element Including Precautionary Statements

Pictogram : 

Signal Word : Danger

Hazard Statement(s):  
 : H290 - May be corrosive to metals.  
 : H314 - Causes severe skin burns and eye damage.  
 : H318 - Serious Eye Damage/Eye Irritation  
 H402- Harmful to Aquatic Life

Precautionary Statement(s):  
 : P233 - Keep container tightly closed  
 : P260 - Do not breathe dust/fume/gas/mist/vapors/spray.  
 : P264 - Wash skin thoroughly after handling.  
 : P273 - Avoid release to the environment.  
 : P280 - Wear protective gloves/protective clothing/eye protection/face

protection.

- : P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do not induce vomiting.
- : P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- : P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
- : P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- : P310 - Immediately call a POISON CENTER/doctor/physician.
- : P363 - Wash contaminated clothing before reuse.
- : P390 - Absorb spillage to prevent material-damage.
- : P406 - Store in corrosive resistant container/container with a resistant inner liner.
- : P501 - Dispose of contents/container in accordance with local regulations.

### 2.3 Hazards not Classified or not covered by the GHS

No other hazards identified.

## SECTION 3 – Composition, Information on Ingredients

### 3.1 Substances

Component	Formula	CAS-No	Weight %
Water	H <sub>2</sub> O	7732-18-5	73-77%
Sodium Hydroxide	NaOH	1310-73-2	23-27%

## SECTION 4 – First Aid Measures

### 4.1 Description of Necessary First Aid Measures

- General Advice : If feeling unwell, seek medical attention immediately.
- Eyes : Immediately flush eye with tepid water for at least 15 minutes, lifting lower and upper eyelids occasionally. Seek medical attention immediately.
- Skin : Immediately wash affected skin area with soap and water while removing contaminated clothing and shoes. Flush the area with large amounts of water for at least 15 minutes. Wash clothing before reuse. Seek medical attention for severe exposures.
- Ingestion : Do not induce vomiting. If the person is able to swallow, give them large quantities of water to dilute the solution Never give anything by mouth to an unconscious person Perforation of the esophagus and stomach is possible. Seek medical attention immediately.
- Inhalation : Move the exposed person to fresh air immediately. If breathing has stopped, perform artificial respirations. Seek medical attention immediately.

### 4.2 Most Important Symptoms/Effects, Acute and Delayed

Severe exposures could lead to destruction of skin at the site of contact and varying degrees of irritation to the respiratory system. Effects may be delayed.

### 4.3 Indication of Immediate Medical Attention and Special Treatment

Seek medical attention immediately if unintentional skin or eye contact has been made.

### 4.4 Note to Physician

Perform endoscopy if ingestion occurred. Continual monitoring and general supportive measures should be taken.

## SECTION 5 – Firefighting Measures

### 5.1 Extinguishing Media

Substance is not a fire hazard, use appropriate extinguishing media for surrounding environment.

## 5.2 Specific Hazards Associated with this Chemical

Sodium Hydroxide Solution can react with certain metals, such as aluminum, to create hydrogen gas.

CAUTION: Adding water to caustic generates significant heat.

## 5.3 Special Equipment/Precautions for Firefighters

Wear NIOSH approved self-contained breathing apparatus and full protective clothing.

## SECTION 6 – Accidental Release Measures

### 6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Appropriate Personal Protective Equipment (PPE) must be worn when handling this product. Personnel not wearing personal protective equipment must remain clear of this solution. Avoid contact with unprotected skin or eyes. Seek immediate medical attention if contact is made.

### 6.2 Environmental Precautions

Prevent spillage from entering drains. Report release to Federal or local regulatory authorities as required.

### 6.3 Methods and Materials for Containment and Cleaning Up

Neutralize the spill with a weak acid. Absorb the spill with noncombustible absorbent material such as vermiculite. Place material in suitable container for disposal. Clean surfaces thoroughly with dilute acetic and water to remove residual contamination. Dispose of all materials in accordance with regulations.

## SECTION 7 – Handling and Storage

### 7.1 Precautions for Safe Handling

Wear appropriate personal protection equipment as outlined in Section 8. Keep container closed when not in use.

### 7.2 Conditions for Storage Including any Incompatibilities

Store in cool, well ventilated and dry area. Keep above 16°C (60°F) to prevent freezing. Keep away from incompatible materials such as metals, strong acids, and strong oxidizers.

## SECTION 8 – Exposure Controls, Personal Protection

### 8.1 Control Parameters

Component	Exposure Limits	Basis	Source
NaOH	2.0 mg/m <sup>3</sup>	PEL	OSHA
NaOH	2.0 mg/m <sup>3</sup>	TLV	ACGIH

PEL : Permissible Exposure Limit

TLV : Threshold Limit Value

### 8.2 Personal Protective Measures

#### Eyes

Chemical safety goggles or safety glasses and a face shield.

#### Skin

Skin should be covered at all times with chemically resistant materials and fabrics.

#### Hands

Chemically resistant protective gloves

#### Respiratory

Wear full NIOSH approved respiratory equipment if proper ventilation cannot be achieved.

## SECTION 9 – Physical and Chemical Properties

### 9.1 Chemical Property Information

Appearance	: Colorless to slightly gray liquid
Odor	: Odorless
Odor Threshold	: No information available
pH	: 14.0
Melting Point	: N/A
Boiling Point	: 110°C
Evaporation Rate	: No information available
Auto-ignition temperature	: No information available
Upper/Lower Flammability Limit	: N/A
Vapor Pressure	: No information available
Vapor Density	: >1.0
Specific Gravity/Density	: 1.28
Solubility	: Soluble in water
Flash Point	: N/A
Flammability	: N/A
Decomposition Temperature	: No information available

## SECTION 10 – Stability and Reactivity

### 10.1 Chemical Stability

Stable under normal storage conditions.

### 10.2 Conditions to Avoid

Storage in high heat due to accelerated corrosion.

### 10.3 Incompatibilities with Other Materials

Water, acids, metals.

### 10.4 Hazardous Decomposition Products

None expected under normal storage and use

## SECTION 11 – Toxicological Information

### 11.1 Toxicological Effects

LD50/LC50	: No information available
Carcinogenicity	: Not proven to be a carcinogen by IARC, NTP, OSHA, or ACGIH.
Potential Health Effects	: Severity of the damage will depend on the length of time of exposure. Eyes may burn, skin may burn, respiratory symptoms may include burning and choking, ingestion may create nausea and vomiting along with severe pain.
Respiratory or Skin Sensitization	: No information available
Epidemiology	: No information available
Skin Irritation	: Corrosive! Contact with skin can cause irritation or severe burns and scarring with greater exposures.
Eye Contact	: Corrosive! Causes irritation of eyes, and with greater exposures it can cause burns that may result in permanent eye damage, even blindness.
Ingestion	: Corrosive! Swallowing may cause severe burns of mouth, throat, and stomach. Severe scarring of tissue and death may occur. Symptoms may include diarrhea, vomiting, drop in blood pressure, or bleeding. Damage may appear days after exposure.
Inhalation	: Severe irritant. Effects from inhalation of mist vary from mild irritation to serious damage of the upper respiratory tract depending on exposure. Symptoms may include sneezing, sore throat, running nose, shortness of breath. Severe pneumonia may occur.
Teratogenicity	: No information available
Reproductive Effects	: No information available
Neurotoxicity:	: No information available
Mutagenicity	: No information available

## SECTION 12 – Ecological Information

### 12.1 Ecotoxicity

Harmful to aquatic life due to its ability to alter pH.

### 12.2 Persistence and Degradability

Expected to readily biodegrade.

### 12.3 Bio Accumulative Potential

No information available

### 12.4 Mobility in Soil

Likely mobile in soil due to its solubility in water.

### 12.5 Result of PBT and vPvB assessment

No information available

### 12.6 Other Adverse Effects

Not Applicable

## SECTION 13 – Disposal Considerations

### 13.1 Disposal Methods

Whatever cannot be saved for recovery or recycled should be managed in an appropriate waste facility. Dispose of container and contents in accordance to local/state/federal regulations.

## SECTION 14 – Transport Information

Regulations	US DOT	IATA	IMDG
Shipping Name	Sodium Hydroxide Solution	Sodium Hydroxide Solution	Sodium Hydroxide Solution
Hazard Class	8	8	8
UN Number	UN1824	UN1824	UN1824
Packing Group	II	II	II

## SECTION 15 – Regulatory Information

### 15.1 EHS Chemical Specific Regulations

#### Federal, State, & International Regulations

Ingredient	Sodium Hydroxide	Water
	<b>1310-73-2</b>	<b>7732-18-5</b>
<b>SARA 302 RQ</b>	NO	NO
<b>SARA 302 TPQ</b>	NO	NO
<b>SARA 313 List Chemical</b>	NO	NO
<b>SARA 313 Category</b>	NO	NO
<b>RCRA CERCLA</b>	1000	NO
<b>RCRA 261.33</b>	NO	NO
<b>TSCA INVENTORY</b>	YES	YES
<b>TSCA 8(d)</b>	NO	NO

## SECTION 16 – Additional Information

### 16.1 Hazard Ratings

**HMIS Classification**

Health	3
Fire	0
Reactivity	1
Personal	H

**NFPA Rating**

Health	3
Fire	0
Reactivity	1

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