



SECTION 1 - Chemical Product and Company Identification

1.1 Product Identifiers

Product Name : Sodium Hydroxide Solution 0.5N
 CAS # : 1310-73-2
 EC # : 215-185-5
 RTECS # : WB4900000
 REACH Registration Number : 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

1.4 Emergency Numbers

Emergency Numbers:

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

SECTION 2 – Hazard Identification

2.1 Classification of Substance or Mixture

Classified as a hazard per GHS & Regulation (EC) 1272/2008
 May be corrosive to metals (H290)
 Causes severe skin burns and eye damage (H314)
 Causes Serious Eye Damage (H318)

2.2 GHS Label Elements Including Precautionary Statements

Hazard Pictograms (GHS & CLP)



Signal Word (GHS & CLP) Hazard Statements (GHS & CLP)

: **Danger**
 : H290 May be corrosive to metals
 : H314 Causes severe skin burns and eye damage

Precautionary Statements (GHS & CLP):

: P260 Do not breathe dust/fume/gas/mist/vapors/spray
 : P264 Wash hands, forearms, and face thoroughly after handling
 : 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

: P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes.
: Remove contact lenses, if present and easy to do. Continue rinsing.
: P510 Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national, and/or international regulation

2.3 Hazards not Classified or not Covered by the GHS

No information available.

SECTION 3 – Composition, Information on Ingredients

Component	Classification	Concentration
Sodium Hydroxide	Met Corr. 1 (H290) Skin Corr. 1A (H314)	1-3%
Water	Not Hazardous	97-99%

Synonyms : Caustic soda, lye
EC Number : 215-185-5
CAS Number : 1310-73-2
Molecular Weight : 40.00 g/mol
Molecular Formula : NaOH

SECTION 4 – First Aid Measures

4.1 Description of Necessary First Aid Measures

Eyes : Flush eyes with plenty of tepid water for at least 15 minutes, occasionally lifting the upper and lower lids. Remove contact lens, if present and able to do so. Contact a physician.

Skin : Flush with plenty of tepid water for at least 15 minutes. Do not apply neutralizing agents. Contact a physician if irritation persists.

Ingestion : Rinse mouth with water. DO NOT induce vomiting, unless instructed to do so. May cause esophageal irritation/burns. Contact a physician.

Inhalation : Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen and contact a physician.

4.2 Most Important Symptoms/Effects, Acute and Delayed

Refer to Section 2.2 for Precautionary Statements.

4.3 Indication of Immediate Medical Attention and Special Treatment

Treat symptomatically and supportively.

SECTION 5 - Firefighting Measures

5.1 Extinguishing Media

Water spray, dry powder, foam, or carbon dioxide

5.2 Specific Hazards Associated with this Chemical

Sodium oxides

5.3 Special Equipment/Precautions for Firefighters

As with any fire, wear self-contained breathing apparatus pressure-demand, NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

5.4 Other Information

None available

SECTION 6 - Accidental Release Measures

6.1 Personal Precautions, Protective Equipment and Emergency Procedures

Use Personal Protective Equipment. Ensure adequate ventilation. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

6.2 Environmental Precautions

Avoid release to the environment.

6.3 Methods and Materials for Containment and Cleaning Up

Clean up spills immediately, observing precautions in the Protective Equipment section. Use neutralizing agent such as sodium bicarbonate, sweep up neutralized material, then place into a suitable clean, dry, closed container for disposal. Avoid generating dusty conditions.

6.4 Other Information

Refer to protective measures listed in Section 8 & 13.

SECTION 7 - Handling and Storage

7.1 Precautions for Safe Handling

Do not get in eyes, on skin, or on clothing. Wear Personal Protective Equipment. Use only in well-ventilated areas. Do not breathe vapors or spray mist. Do not ingest. Wash exposed skin thoroughly after handling.

7.2 Conditions for Storage Including any Incompatibilities

Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from acids. Keep containers tightly closed.

7.3 Other Information

No additional information available.

SECTION 8 - Exposure Controls, Personal Protection

8.1 Control Parameters

Component	ACGIH Ceiling (mg/m ³)	OSHA PEL	The United Kingdom	Ireland
Sodium Hydroxide	2 mg/m ³	2 mg/m ³	STEL: 2 mg/m ³	STEL: 2 mg/m ³

8.2 Engineering Controls

Emergency eye wash and safety showers should be available in the immediate area of any potential exposure.

8.3 Personal Protective Equipment

Eyes

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin

Wear appropriate protective gloves to prevent skin exposure. Wear impervious gloves.

Clothing

Wear appropriate protective clothing to prevent skin exposure.

Respirators

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant a respirator's use.

SECTION 9 - Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Clear colorless liquid
Odor	: Odorless
pH	: ≥ 14
Vapor Density	: Not available
Viscosity	: 1.43 cSt
Boiling Point	: 221-284 °F/105-140°C
Freezing Point	: 18-25°F
Specific Gravity/Density	: 1.01 g/mL
Solubility	: Soluble in water

SECTION 10 - Stability and Reactivity

10.1 Chemical Stability

Stable under normal temperatures and pressures.

10.2 Conditions to Avoid

Exposure to air, temperature extremes, and incompatible materials.

10.3 Incompatibilities with Other Materials

Acids, organic materials, metals, aluminum, copper, zinc

10.4 Hazardous Decomposition Products

Sodium oxides

10.5 Hazardous Polymerization

Will not occur.

SECTION 11 - Toxicological Information

11.1 Toxicological Effects

LD50/LC50 Oral, rat	: LD50 = >5000 mg/kg
Carcinogenicity	: No data available
Epidemiology	: No data available
Teratogenicity	: No data available
Reproductive Effects	: No data available
Neurotoxicity	: No data available
Mutagenicity	: No data available
Other Studies	: Product is a corrosive material. Use of gastric lavage or emesis is contraindicated. Possible perforation of stomach or esophagus should be investigated. Ingestion causes severe swelling, severe damage to the delicate tissue and danger of perforation.

11.2 Additional Information

RTECS# : WB4900000

To the best of our knowledge the associated physical, chemical and toxicological properties of this chemical have not undergone thorough investigation, all known information is contained in this SDS.

SECTION 12 - Ecological Information

12.1 Ecotoxicity

Toxicity to Daphnia and Other Aquatic Invertebrates

LC50 – Fishes	613 mg/l
EC50 – Daphnia	545 mg/l

12.2 Persistence and Degradability

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

This substance is not considered to be persistent, Bioaccumulating nor toxic (PBT).

12.6 Other Adverse Effects

May cause pH changes in aqueous ecological systems.

SECTION 13 - Disposal Considerations

Dispose of in a manner consistent with Federal, State, and Local Regulations.

SECTION 14 - Transport Information

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

SECTION 15 - Regulatory Information

15.1 EHS Chemical Specific Regulations

SARA:

Section 302	: Not Available
Section 313	: Not Available
SARA 311/312 Hazards	: Immediate (acute) health hazard
Reportable Quantity	: 1000lbs
TSCA	: Listed on the inventory
EINECS/ELINCS/NLP	: Listed on the inventory
Annex XVII Restrictions	: None known

STATE SPECIFIC:

Massachusetts Right To Know Components	: No components are subject to the Massachusetts Right to Know Act.
Pennsylvania Right To Know Components	: No components are subject to the Pennsylvania Right to Know Act.
New Jersey Right To Know Components	: No components are subject to the New Jersey Right to Know Act.
California Prop. 65 Components	: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

SECTION 16 - Additional Information

16.1 Hazard Ratings

NFPA Rating	
Health hazard	3
Fire Hazard	0
Reactivity Hazard	1

HMIS Classification	
Health hazard	3
Flammability	0
Physical Hazards	1

The information conveyed in this Safety Data Sheet is only a representation of what BioSpectra has found to be accurate based on the current information that is available in regards to this compound. BioSpectra makes no warranty, expressed or implied, with respect to such information, and therefore assumes no liability resulting from product usage. It is strongly recommended that users of this product perform their own investigations to determine the accuracy and suitability of the information for their specific purposes. In no way will BioSpectra assume liability for any claims, losses, damages to any third party, any lost profits or any special, indirect, incidental, consequential or exemplary damages that may arise, even if BioSpectra has been advised of the possibility of such damages.