



**SAFETY DATA SHEET**  
**Sodium Hydroxide 50% Solution**

**SDS # :** 1310-73-2--50  
**Revision date:** 2018-08-28  
**Format:** NA  
**Version** 1.05

**1. PRODUCT AND COMPANY IDENTIFICATION**

**Product Identifier**

**Product Name** Sodium Hydroxide 50% Solution

**Other means of identification**

**Product Code(s)** 1310-73-2--50

**Synonyms** Caustic Soda Solution; Lye Solution; Sodium Hydrate Solution,  
White Caustic Solution

**Recommended use of the chemical and restrictions on use**

**Recommended Use:** pH adjustment

**Restrictions on Use:** See section 16 for more information

**Manufacturer Address**

Genesis Specialty Alkali, LLC  
1735 Market Street  
Philadelphia, PA 19103  
Tel: +1 877 / 362-2248 or +1 215 / 845-4500  
[www.alkali.genesisenergy.com](http://www.alkali.genesisenergy.com)

**Emergency telephone number**

1 307 / 872 2452 (Plant - Green River, WY)  
1 (303) 595-9048 (Medical - U.S. - Call Collect)

For leak, fire, spill or accident emergencies, call:  
1 800 / 424 9300 (CHEMTREC - U.S.A.)  
1 703 / 527 3887 (CHEMTREC - Collect - All Other Countries)

**2. HAZARDS IDENTIFICATION**

**Classification**

**OSHA Regulatory Status**

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Skin corrosion/irritation

Category 1 Sub-category A

# Sodium Hydroxide 50% Solution

SDS #: 1310-73-2--50  
Revision date: 2018-08-28  
Version 1.05


Serious eye damage/eye irritation	Category 1
Corrosive to Metals	Category 1

## GHS Label elements, including precautionary statements

### EMERGENCY OVERVIEW

**Danger**

**Hazard Statements**  
H314 - Causes severe skin burns and eye damage  
H290 - May be corrosive to metals



#### Precautionary Statements - Prevention

- P264 - Wash face, hands and any exposed skin thoroughly after handling
- P260 - Do not breathe dust/fume/gas/mist/vapors/spray
- P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection

#### Precautionary Statements - Response

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

#### Precautionary Statements - Storage

- P405 - Store locked up
- P406 - Store in corrosive resistant/ stainless steel container with a resistant inner liner

#### Precautionary Statements - Disposal

- P501 - Dispose of contents/ container to an approved waste disposal plant

#### Hazards not otherwise classified (HNOC)

No hazards not otherwise classified were identified.

#### Other Information

Harmful to aquatic life with long lasting effects

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Formula NaOH

Chemical name	CAS-No	Weight %
Sodium Hydroxide	1310-73-2	50
Water	7732-18-5	50

Synonyms are provided in Section 1.

## 4. FIRST AID MEASURES

<b>General Advice</b>	Flush with plenty of water immediately. Continue flushing during transport to hospital or medical center.
<b>Eye Contact</b>	In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Seek immediate medical attention/advice.
<b>Skin Contact</b>	Immediately flush with plenty of water while removing contaminated clothing and/or shoes, and thoroughly wash with soap and water. Seek immediate medical attention/advice.
<b>Inhalation</b>	Remove person to fresh air. If signs/symptoms continue, get medical attention.
<b>Ingestion</b>	Rinse mouth with water and afterwards drink plenty of water or milk. Do not induce vomiting or give anything by mouth to an unconscious person. Call a physician immediately.
<b>Most important symptoms and effects, both acute and delayed</b>	None known.
<b>Indication of immediate medical attention and special treatment needed, if necessary</b>	Sodium hydroxide at this concentration is corrosive. Prolonged dilution with water is required. Neutralization of eye burns is absolutely contraindicated; for skin, 2% acetic acid has been recommended, but washing with water is effective. Ingestion requires milk or water dilution, consideration of esphagoscopy and management for possible esophageal stricture.

**5. FIRE-FIGHTING MEASURES**

<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Specific Hazards Arising from the Chemical</b>	. Not flammable
<b><u>Explosion data</u></b>	
<b>Sensitivity to Mechanical Impact</b>	Not sensitive.
<b>Sensitivity to Static Discharge</b>	Not sensitive.
<b>Protective equipment and precautions for firefighters</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions</b>	In case of spill, avoid contact. Isolate area and keep out animals and unprotected persons. Wear suitable protective clothing, gloves and eye/face protection. For personal protection see section 8.
<b>Other</b>	For further clean-up instructions, call Emergency Hotline number listed in Section 1 "Product and Company Identification" above.
<b>Environmental Precautions</b>	See Section 12 for additional Ecological Information.
<b>Methods for Containment</b>	Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
<b>Methods for cleaning up</b>	Clean contaminated surface thoroughly. Dispose of waste as indicated in Section 13.

**7. HANDLING AND STORAGE**

## Sodium Hydroxide 50% Solution

SDS #: 1310-73-2--50  
Revision date: 2018-08-28  
Version 1.05

<b>Handling</b>	Always wash equipment and containers before use. Dangerous chemical reactions can occur due to improper cleaning. Always add caustic soda to water. Adding water to caustic soda can cause a dangerous reaction. Ensure that water being used for dilution is lukewarm. Never dilute caustic with hot or cold water. Avoid contact with skin and eyes. Do not breathe vapors or spray mist. Avoid contact by using personal protective equipment. Refer to Section 8.
<b>Storage</b>	Keep containers tightly closed in a cool, well-ventilated place. Keep away from incompatible products (acids).
<b>Incompatible products</b>	Acids, flammable liquids, organic halogen compounds, nitro compounds, and amphoteric metals, such as aluminum, magnesium and zinc

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

Ingredients with workplace control parameters

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
Sodium Hydroxide 1310-73-2	Ceiling: 2 mg/m <sup>3</sup>	TWA: 2 mg/m <sup>3</sup>	IDLH: 10 mg/m <sup>3</sup> Ceiling: 2 mg/m <sup>3</sup>	Mexico: Ceiling 2 mg/m <sup>3</sup>
Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
Sodium Hydroxide 1310-73-2	Ceiling: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>	CEV: 2 mg/m <sup>3</sup>	Ceiling: 2 mg/m <sup>3</sup>

### Appropriate engineering controls

**Engineering measures** Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation, especially in confined areas.

### Individual protection measures, such as personal protective equipment

<b>Eye/Face Protection</b>	Use chemical splash-type mono-goggles and a full-face shield made of polycarbonate, acetate, polycarbonate/acetate, PETG or thermoplastic.
<b>Skin and Body Protection</b>	Rubber or vinyl apron. Rubber or plastic boots.
<b>Hand Protection</b>	Rubber or vinyl gloves with gauntlets. Wash the outside of gloves with soap and water prior to removal. Inspect regularly for leaks.
<b>Respiratory Protection</b>	Wear full face-piece respirators approved by MSHA/NIOSH if mists are expected.
<b>Hygiene measures</b>	Avoid contact with skin, eyes and clothing. Avoid breathing vapors, mist or gas. Do not eat, drink or smoke when using this product. Wash hands before breaks and immediately after handling the product. Remove and wash contaminated clothing and gloves, including the inside, before re-use.
<b>General information</b>	If the product is used in mixtures, it is recommended that you contact the appropriate protective equipment suppliers

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Information on basic physical and chemical properties

<b>Appearance</b>	Clear to cloudy white, odorless liquid
<b>Physical State</b>	Liquid
<b>Color</b>	No information available
<b>Odor</b>	odorless
<b>Odor threshold</b>	No information available
<b>pH</b>	13.7
<b>Melting point/freezing point</b>	Not applicable

## Sodium Hydroxide 50% Solution

SDS #: 1310-73-2--50  
Revision date: 2018-08-28  
Version 1.05

Boiling Point/Range	145 °C / 293 °F
Flash point	Not applicable
Evaporation Rate	No information available
Flammability (solid, gas)	No information available
Flammability Limit in Air	
Upper flammability limit:	No information available
Lower flammability limit:	No information available
Vapor pressure	6.33 mm Hg @ 40 °C
Vapor density	No information available
Density	No information available
Specific gravity	1.53 @ 15.5 °C
Water solubility	completely soluble
Solubility in other solvents	No information available
Partition coefficient	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Viscosity, kinematic	No information available
Viscosity, dynamic	No information available
Explosive properties	No information available
Oxidizing properties	Non-oxidizing
Molecular weight	No information available
Bulk density	No information available

### 10. STABILITY AND REACTIVITY

Reactivity	Not applicable
Chemical Stability	Stable under normal conditions.
Possibility of Hazardous Reactions	Reacts with many compounds.
Hazardous polymerization	Hazardous polymerization does not occur.
Conditions to avoid	Excessive heat, Incompatible products
Incompatible materials	Acids, flammable liquids, organic halogen compounds, nitro compounds, and amphoteric metals, such as aluminum, magnesium and zinc.
Hazardous Decomposition Products	None known based on information supplied.

### 11. TOXICOLOGICAL INFORMATION

#### Product Information

Serious eye damage/eye irritation	Corneal lesions and irreversible damage if contact with the eyes.
Skin corrosion/irritation	Corrosive to skin.

Chemical name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium Hydroxide (1310-73-2)	400 mg/kg (rabbit) (37% solution)	= 1350 mg/kg ( Rabbit )	Corrosive

#### Information on toxicological effects

Symptoms	No information available.
----------	---------------------------

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic toxicity	Sodium hydroxide may produce inflammation of the eyes, skin, and mucous membranes. Esophageal carcinoma at the site of a chronic lye stricture has been reported. [Gosselin , Smith & Hodge 1984].
------------------	--

# Sodium Hydroxide 50% Solution

SDS #: 1310-73-2--50  
Revision date: 2018-08-28  
Version 1.05

**Mutagenicity** No information available  
**Carcinogenicity** Not recognized as carcinogenic by Research Agencies (IARC, NTP, OSHA, ACGIH).  
**Reproductive toxicity** No information available.  
**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Aspiration hazard** No information available.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Chemical name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates
Sodium Hydroxide 1310-73-2		96 h LC50: = 45.4 mg/L ( <i>Oncorhynchus mykiss</i> )	

**Persistence and degradability** There is no degradation of sodium hydroxide in waters, only loss by absorption or through chemical neutralization.

**Bioaccumulation** No information available.

## 13. DISPOSAL CONSIDERATIONS

**Waste disposal methods** This material, as supplied, is a hazardous waste according to federal regulations (40 CFR 261). It must undergo special treatment, e.g. at suitable disposal site, to comply with local regulations. Can be disposed as waste water, when in compliance with local regulations.

**Contaminated Packaging** Dispose of in accordance with local regulations.

Chemical name	California Hazardous Waste Status
Sodium Hydroxide 1310-73-2	Toxic Corrosive

## 14. TRANSPORT INFORMATION

### DOT

**UN/ID no** UN1824  
**Proper Shipping Name** Sodium hydroxide solution  
**Hazard class** 8  
**Packing Group** II  
**Reportable Quantity (RQ)** Sodium hydroxide: RQ = 1000 lbs.  
**Special Provisions** B2, IB2, N34, T7, TP2  
**Emergency Response Guide Number** 154

### TDG

**UN/ID no** UN1824  
**Proper Shipping Name** Sodium hydroxide solution  
**Hazard class** 8  
**Packing Group** II

### ICAO/IATA

**UN/ID no** UN1824  
**Proper Shipping Name** Sodium hydroxide solution  
**Hazard class** 8  
**Packing Group** II  
**Special Provisions** A3  
**Limited quantity** 0.5 L

### IMDG/IMO

**UN/ID no** UN1824

**Sodium Hydroxide 50% Solution**

**SDS # :** 1310-73-2--50  
**Revision date:** 2018-08-28  
**Version** 1.05

**Proper Shipping Name** Sodium hydroxide solution  
**Hazard class** 8  
**Packing Group** II  
**EmS No.** F-A, S-B

**ADR/RID**

**UN/ID no** UN1824  
**Proper Shipping Name** Sodium hydroxide solution  
**Hazard class** 8  
**Packing Group** II  
**Classification code** C5  
**Tunnel restriction code** (E)  
**ADR/RID-Labels** 8

**15. REGULATORY INFORMATION**

**U.S. Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

**SARA 311/312 Hazard Categories**

**Acute health hazard** Yes  
**Chronic health hazard** No  
**Fire hazard** No  
**Sudden release of pressure hazard** No  
**Reactive Hazard** No

**Clean Water Act**

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42):


Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Sodium Hydroxide 1310-73-2	1000 lb			X

**CERCLA**

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	RQ
Sodium Hydroxide 1310-73-2	1000 lb		RQ 1000 lb final RQ RQ 454 kg final RQ

**US State Regulations**

**California Proposition 65**

 **WARNING:** This product can expose you to chemicals including lead, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**U.S. State Right-to-Know Regulations**

Chemical name	New Jersey	Massachusetts	Pennsylvania
Sodium Hydroxide 1310-73-2	X	X	X

