

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name Sodium Hydroxide 4% Solution
CAS number 1310-73-2
Synonyms N/A

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses Laboratory chemicals.

1.3 Details of the supplier of the safety data sheet

Company Lab Alley, LLC
 12501 Pauls Valley Road
 Austin, Texas 78737
 U.S.A.

Telephone 512-668-9918
Fax 512-886-4008

1.4 Emergency telephone

Emergency Phone # US & Canada: 1-800-535-5053 INFOTRAC
 International 1-352-323-3500 INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin Corrosion	Category 1A
Eye Damage	Category 1
Corrosive to metals	Category 1

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statements

Causes severe skin burns and eye damage; causes serious eye damage. May be corrosive to metals.

Precautionary statements

Prevention: Do not breathe dusts or mists. Wash body thoroughly after handling. Wear protective gloves, protective clothing, eye protection, and face protection.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

IF ON SKIN/HAIR: Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before re-use.

IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a doctor.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Storage: Store locked up.

Disposal: Dispose of contents/container in accordance with local regulations.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None identified.

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Sodium Hydroxide	Caustic soda	1310-73-2	4%
Water	H ₂ O	7732-18-5	96%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled

Remove to fresh air; give artificial respiration if breathing has stopped. Get medical advice/attention if you feel unwell.

In case of skin contact Corrosive. If on skin (or hair), take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before re-use. If skin irritation occurs, get medical advice/attention.

In case of eye contact Corrosive. If in eyes, rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.

If swallowed Corrosive to internal tissue. Do NOT induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Eyes, nose, throat irritation; headache, dizziness, chemical burns.

4.3 Indication of any immediate medical attention and special treatment needed

No information available.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Dry chemical, Carbon dioxide, alcohol foam, water.

Unsuitable extinguishing media No information available.

5.2 Specific hazards arising from the substance or mixture

Carbon monoxide and unidentified organic compounds may be formed during combustion. Not flammable.

5.3 Special protective equipment and precautions for firefighters

Firefighters should use self-contained breathing apparatus and protective clothing.

5.4 Further information

Flash Point No information available.

Autoignition Temperature No information available.

Explosion limits

Upper No information available.

Lower No information available.

Sensitivity to Mechanical Impact

No information available.

Sensitivity to Static Discharge

No information available.

NFPA

Health	Flammability	Instability	Physical hazards
3	0	1	COR

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

See Section 8 for protective equipment. In cases of emergency: evacuate the area of all unnecessary personnel, wear suitable protective equipment, eliminate all sources of ignition, and provide ventilation.

6.2 Environmental precautions

Prevent release into the environment.

6.3 Methods and materials for containment and cleaning up

Use barriers to prevent spreading. Absorb with inery material and dispose of in accordance with applicable regulations.

6.4 Reference to other sections

See section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Do not breathe vapors. Do not eat, drink, or smoke when using this product.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store locked up and away from acids. Keep containers tightly sealed when not in use. Keep cool.

Incompatibilities

Oxidizers, strong acids, strong bases.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Sodium Hydroxide	PEL-TWA	2 mg/m ³

US. ACGIH Threshold Limit Values

Component	Type	Value
Sodium Hydroxide	PEL-TLV	2 mg/m ³ Ceiling

US. NIOSH: Pocket Guide to Chemical Hazards

Component	Type	Value
Sodium Hydroxide	Ceiling	2 mg/m ³

Biological occupational exposure limits

No information available.

8.2 Exposure controls**Appropriate engineering controls**

Use in a well-ventilated area to prevent exposure. Maintain eyewash fountain and quick-drench facilities in work areas.

Personal protective equipment**Eye/face protection**

Wear chemical goggles; face shield (if splashing is possible).

Skin protection

Chemical resistant, impermeable gloves. Use of impervious apron or chemical suit and chemical resistant boots are recommended.

Body Protection

Chemical resistant, impermeable gloves. Use of impervious apron or chemical suit and chemical resistant boots are recommended.

Respiratory protection

Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection.

Control of environmental exposure

No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Liquid
Appearance	Colorless
Odor	Bland
Odor Threshold	No information available
pH	13.80 - 14.00
Melting Point/Range	35 °F (1.66 °C)
Boiling Point/Range	212 °F (100 °C)
Evaporation Rate	No information available
Flammability (solid)	No information available
Flammability or explosive limit	No information available
Upper	
Lower	
Vapor Pressure	No information available
Vapor Density	No information available
Density	1.035 - 1.045
Solubility	Soluble in water
Partition coefficient; n-octanol/water	No information available
Autoignition Temp	No information available
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	NaOH
Molecular Weight	39.9971 g/mol
VOC Content(%)	No information available
Oxidizing properties	No information available

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

No information available.

10.2 Chemical stability

Stable.

10.3 Possibility of hazardous reactions

No information available.

10.4 Conditions to avoid

Avoid incompatible materials and direct contact with acids.

10.5 Incompatible materials

Oxidizers, strong acids, strong bases.

10.6 Hazardous decomposition products

Thermal-oxidation degradation can produce oxides of carbon. Toxic gases and vapors (i.e. Carbon monoxide) may be released in a fire.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium Hydroxide	140-340 mg/kg (Rat)	-	-

Skin corrosion/irritation

Corrosive. Contact with skin can cause irritation or severe burns and scarring with greater exposures.

Serious eye damage/eye irritation

Corrosive. Causes irritation of the eyes, and with greater exposures, burns and vision impairment.

Respiratory or skin sensitization

Severe irritant. Effects from inhalation vary from mild irritation to serious damage, depending on severity of exposure. Symptoms may include sneezing, sore throat, or runny nose.

Germ cell mutagenicity

No information available.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Sodium Hydroxide	1310-73-2	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure

No information available.

Specific target organ toxicity - repeated exposure

None known.

Reproductive toxicity

No information available.

Chronic effects

No information available.

11.2 Additional Information

No information available.

SECTION 12: Ecological information**12.1 Toxicity**

Harmful to aquatic life.

Product		Species	Test Results
Sodium Hydroxide	LC50	Bluegill sunfish	99 mg/L 48h
	LC50	Mosquito fish	125 mg/L 96h
	LC50	Brown shrimp	30 -100 mg/L 48h

12.2 Persistence and degradability

No information available

12.3 Bio accumulative potential

No information available.

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

No information available.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations**13.1 Waste Disposal Methods**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

SECTION 14: Transport information**DOT (US)****UN-No**

UN1824

Proper Shipping Name

SODIUM HYDROXIDE SOLUTION

Hazard Class 8
Packing Group III

IMDG

UN-No UN1824
Proper Shipping Name SODIUM HYDROXIDE SOLUTION
Hazard Class 8
Packing Group III

IATA

UN-No UN1824
Proper Shipping Name SODIUM HYDROXIDE SOLUTION
Hazard Class 8
Packing Group III

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Not applicable.

CERCLA Hazardous Substance List (40 CFR 302.4)
Listed, Sodium hydroxide (CAS #1310-73-2), 1000 lb.

SARA 304 Emergency release notification
Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)
SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous
Listed: Acute Health Hazard.

SARA 313 (TRI reporting)
Not listed.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act

Listed, Sodium hydroxide (CAS #1310-73-2), 1000 lb.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace

Not listed.

US state regulations**US. Massachusetts RTK - Substance List**

Listed, Sodium hydroxide (CAS #1310-73-2).

US. New Jersey Worker and Community Right-to-Know Act

Listed, Sodium hydroxide (CAS #1310-73-2).

US. Pennsylvania Worker and Community Right-to-Know Law

Listed, Sodium hydroxide (CAS #1310-73-2).

California Proposition 65

Not listed.

SECTION 16: Other information

Issue date: 02/28/2019

Revision 1: 08/26/2024

Revision 2: 10/09/2024

SECTION 17: Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.