

**SECTION 1: IDENTIFICATION****Product Identifier****Product Form:** Liquid**Product Name:** 0.2 M Sodium Hydroxide**Synonyms:** 0.2 M NaOH, 0.2 M Lye, 0.2 M Caustic soda**Intended Use of the Product****Use of the Substance/Mixture:** Used as a regenerative agent in LSA experiments

Company

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**Emergency Number:** 1-800-535-5053 for domestic USA, 1-352-323-3500 for International.**Account Number:** 114962**SECTION 2: HAZARDS IDENTIFICATION****Classification of the Substance or Mixture****GHS-US Classification**

Corrosive to metals 1

Skin corrosion 1A

Serious eye damage 1

Acute aquatic toxicity 3

**Label Elements****GHS-US Labeling****Hazard Pictograms (GHS-US)** :**Signal Word (GHS-US)** :**Warning****Hazard Statements (GHS-US)** :**H290 – May be corrosive to metals.****H314 – Causes severe skin burns and eye damage.****H318 – Causes serious eye damage.****H402 – Harmful to aquatic life****Precautionary Statements (GHS-US)** :**P234 – Keep only in original container****P260 – Do not breathe dust or mist****P264 – Wash skin thoroughly after handling.****P273 – Avoid release to the environment****P280 – Wear protective glove/ 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): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower****P304 + P340 + P310 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER/ doctor.****P305 + P351 + P338 + P310 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.****P363 – Wash contaminated clothing before reuse.****P390 – Absorb spillage to prevent material damage.**

P405 – Store locked up  
P406 – Store in a corrosive resistant steel container with a resistant inner liner.  
P501 – Dispose of contents/ container to an approved waste disposal plant.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****Mixture**

Name	CAS No.	%	Classification
Sodium Hydroxide	1310-73-2	0.25 – 0.5	H290, H314, H318, H402
Water	7732-18-5	99.5 – 99.75	None Specified

**SECTION 4: FIRST AID MEASURES**

**First-aid Measures General:** Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice

**First-aid Measures After Inhalation:** Move to fresh air. If not breathing, give artificial respiration. Consult a physician.

**First-aid Measures After Skin Contact:** Wash off immediately with soap and plenty of water, removing all contaminated clothes and shoes. Consult a physician.

**First-aid Measures After Eye Contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

**First-aid Measures After Ingestion:** Do NOT induce vomiting. Rinse mouth with water. Consult a physician.

**Most Important Symptoms and Effects Both Acute and Delayed**

**Symptoms/Injuries:** None specified

**Symptoms/Injuries After Inhalation:** None specified

**Symptoms/Injuries After Skin Contact:** None specified

**Symptoms/Injuries After Eye Contact:** None specified

**Symptoms/Injuries After Ingestion:** None specified

**Chronic Symptoms:** None specified

**Indication of Any Immediate Medical and Special Treatment Needed**

Note to Physician: Treat symptomatically.

**SECTION 5: FIRE-FIGHTING MEASURES**

**Suitable Extinguishing Media:** Dry chemical, CO<sub>2</sub>, water spray, or regular foam

**Unsuitable Extinguishing Media:** None specified

**Special Hazards Arising from the Substance or Mixture**

**Fire Hazard:** None

**Explosion Hazard:** None

**Reactivity:** No information available

**Advice for Firefighters**

**Precautionary Measures:** No information available

**Firefighting Instructions:** No information available

**Protection During Firefighting:** MSHA/NIOSH (approved or equivalent) and full protective gear.

**SECTION 6: ACCIDENTAL RELEASE MEASURES****Personal Precautions, Protective Equipment, and Emergency Procedures**

**General Measures:** Avoid contact with skin, eyes, and clothing. Remove and wash contaminated clothing before reuse. Do not breath vapors/dust.

**For Non-Emergency Personnel**

**Protective Equipment:** Wear protective gloves/clothing

**Emergency Procedures:** Evacuate non-essential personnel from laboratory

**For Emergency Personnel**

**Protective Equipment:** Wear protective gloves/clothing

**Emergency Procedures:** Evacuate non-essential personnel from laboratory

**Environmental Precautions**

No information available

**Methods and Materials for Containment and Cleanup**

**For Containment:** Prevent further leakage or spillage if safe to do so

**Methods for Cleanup:** Pick up and transfer to properly labeled containers. Ventilate area and wash spill site after material pickup is complete.

**SECTION 7: HANDLING AND STORAGE**
**Precautions for Safe Handling**

Handle in accordance with good industrial hygiene and safety practice.

**Storage Conditions:** Store at 2-8 °C. Keep containers tightly closed in a well-ventilated place.

**Incompatible Products:** Acids

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**
**Control Parameters**

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), or OSHA (PEL).

Component	CAS-No.	Value	Control Parameters
Sodium Hydroxide	1310-73-2	TWA	2 mg/m <sup>3</sup>
Sodium Hydroxide	1310-73-2	TLV	2 mg/m <sup>3</sup>
Sodium Hydroxide	1310-73-2	REL	2 mg/m <sup>3</sup>
Water	7732-18-5	Not Established	Not Established

**Exposure Controls and Risk Management Measures**

- Appropriate Engineering Controls** : Showers, Eyewash stations, Ventilation systems
- Materials for Protective Clothing** : Nitrile rubber
- Hand Protection** : Glove material: Nitrile rubber  
Glove thickness: 0.11 mm  
Break through time: 480 min
- Eye Protection** : Avoid contact with eyes. Wear face shield and safety glasses with side-shields
- Skin and Body Protection** : Wear protective clothing when handling
- Respiratory Protection** : If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
- Environmental Exposure Controls** : Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into environment must be avoided

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**
**Information on Basic Physical and Chemical Properties**

- Physical State** : Liquid
- Appearance** : Clear
- Odor** : No data available
- Odor Threshold** : No data available
- pH** : 12.68 – 13.16
- Evaporation Rate** : No data available
- Melting Point** : No data available
- 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 (solid, gas)** : No data available
- Vapor Pressure** : No data available
- Relative Vapor Density at 20° C** : No data available
- Relative Density** : No data available
- Specific Gravity** : No data available
- Solubility** : Miscible with water
- Partition Coefficient: N-Octanol/Water** : No data available
- Viscosity** : No data available

**SECTION 10: STABILITY AND REACTIVITY**

**Reactivity:** No data available

**Chemical Stability:** Stable under recommended storage conditions

**Possibility of Hazardous Reactions:** None under normal processing

**Conditions to Avoid:** Extremes of temperature and direct sunlight

**Incompatible Materials:** Strong oxidizers, strong acids, organic materials

**Hazardous Decomposition Products:** Sodium oxides

**SECTION 11: TOXICOLOGICAL INFORMATION****Information on Toxicological Effects****Acute Toxicity:**

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Sodium hydroxide	None Specified	None Specified	None Specified

**Skin Corrosion/Irritation:** Causes severe burns

**pH:** None Specified

**Serious Eye Damage/Irritation:** Causes serious eye damage

**pH:** None Specified

**Respiratory or Skin Sensitization:** Not sensitizing

**Germ Cell Mutagenicity:** None Specified

**Carcinogenicity:** None Specified

**IARC:** None Specified

**NTP:** None Specified

**OSHA:** None Specified

**Reproductive Toxicity:** None Specified

**Specific Target Organ Toxicity (Single Exposure):** None Specified

**Specific Target Organ Toxicity (Repeated Exposure):** None Specified

**Aspiration Hazard:** None Specified

**Symptoms/Injuries After Inhalation:** Material is extremely destructive to tissue of the mucous membranes and upper respiratory track, eyes, and skin.

**Symptoms/Injuries After Skin Contact:** None Specified

**Symptoms/Injuries After Eye Contact:** None Specified

**Symptoms/Injuries After Ingestion:** None Specified

**Chronic Symptoms:** None Specified

**SECTION 12: ECOLOGICAL INFORMATION****Toxicity**

**Aquatic toxicity:** May cause shifts in water pH outside the range of pH 5 -10. Because of the high pH of this product, it would be expected to produce significant ecotoxicity upon exposure to aquatic organisms and aquatic systems. However, may be neutralized by naturally occurring acidity in the environment. The ingredient ecotoxicity data appearing below is expected to be primarily associated with pH.

**Persistence and degradability** Miscible with water. Persistence is unlikely based on information available.

**Behavior in environmental systems:**

**Bioaccumulative potential:** No further relevant information available.

**Mobility in soil:** High water solubility indicates a high mobility in soil **Additional ecological information:** ·

**General notes:** Water hazard class 1 (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system. Must not reach bodies of water or drainage ditch undiluted or unneutralized.

**Results of PBT and vPvB assessment:** · PBT: Not applicable. · vPvB: Not applicable.

**Other adverse effects:** No further relevant information available

**SECTION 13: DISPOSAL CONSIDERATIONS****Waste treatment methods:**

**Recommendation:** Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water

supplies. Do not contaminate ponds, waterways, or ditches with chemical or used container. Dispose of contents and containers in accordance with local/regional/national/international regulations.

**Uncleaned packaging:**

**Recommendation:** Waste codes should be assigned by the user based on the application for which the product was used. Do not empty into drains. Do not dispose of waste into sewer. Large amounts will affect pH and harm aquatic organisms. Solutions with low pH-value must be neutralized before discharge.

**Recommended cleansing agent:** Water, if necessary, with cleansing agents.

**SECTION 14: TRANSPORT INFORMATION**

**UN-Number** · UN1824

**UN proper shipping name:** Sodium hydroxide solution

**DOT Sodium hydroxide solution**

**IMDG, IATA Sodium hydroxide solution**



**Transport hazard class(es):** Class 8 Corrosive substances · Label 8

**IMDG, IATA:** Class 8 Corrosive substances · Label 8

**Environmental hazards:** · Marine pollutant: No

**Special precautions for user**

**Warning:** Corrosive substances

**Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code:** Not applicable.

**Transport/Additional information:**

**DOT Quantity limitations:** No

**IMDG Limited quantities (LQ) 1L:** No

**UN "Model Regulation":** UN 1824 Sodium Hydroxide Solution, Hazard Class 8, Packing Group II-III

**SECTION 15: REGULATORY INFORMATION**

Safety, health, and environmental regulations/legislation specific for the substance or mixture

Section 355 (extremely hazardous substances): None of the ingredients is listed.

Section 313 (Specific toxic chemical listings): None of the ingredients is listed.

TSCA (Toxic Substances Control Act): All ingredients are listed.

Proposition 65 · Chemicals known to cause cancer: None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for females: None of the ingredients is listed.

Chemicals known to cause reproductive toxicity for males: None of the ingredients is listed.

Chemicals known to cause developmental toxicity: None of the ingredients is listed.

Carcinogenic categories ·

EPA (Environmental Protection Agency) None of the ingredients is listed.

TLV (Threshold Limit Value established by ACGIH) None of the ingredients is listed.

NIOSH-Ca (National Institute for Occupational Safety and Health) None of the ingredients is listed. ·

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS). ·



Signal word Danger

Hazard-determining components of labeling: Sodium hydroxide solution

Hazard statements Harmful if swallowed. Causes severe skin burns and eye damage.

Precautionary statements Do not breathe dusts or mists. Wash thoroughly after handling. Do not eat, drink, or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Dispose of contents/container in accordance with local/regional/national/international regulations.

Chemical safety assessment: A Chemical Safety Assessment has not been carried out

**SECTION 16: OTHER INFORMATION**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Creation date for SDS 06/19/2019.

Review SDS for accuracy. 09/29/2022.