1. Identification

Production Name: Sodium Hydroxide

Catalog Number: S004

Company: Caisson Laboratories

Address: 836 South 100 East, Smithfield UT 84335

Telephone: 435.755.7615

Fax: 435.755.7617

Emergency Contact: CHEMTREC 800.424.9300 (703.527.3887)

Recommended Use: For research and laboratory use only.

Restrictions on Use: This product is intended for research and laboratory use only. This product is not to be used as human or animal therapeutics, cosmetics, pesticidal products, food additives, or as household chemicals.

2. Hazard(s) Identification

Classification of the Substance or Mixture

GHS Classification:

H290 – Corrosive to Metals (Category 1)

H314 – Skin corrosion/irritation (Category 2)

GHS Label Elements, Including Precautionary Statements

Signal Word: Danger

Hazard Statements:

H290 – May be corrosive to metals

H314 – Causes severe skin burns and eye damage

Precautionary Statements:

P234 – Keep only in original container.

P260 – Do not breathe dust/fume/gas/mist/vapors/spray.

P264 – Wash hands thoroughly after handling.

P280 – Wear protective gloves/protective clothing/eye protection/face protection.

P363 – Wash contaminated clothing before reuse.

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 [or shower].

P304+P340+P310 – IF INHALED: Remove person to fresh air and keep comfortable for breathing. 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. Call a POISON CENTER/doctor if you feel unwell.

P406 – Store in corrosive resistant/… container with a resistant inner liner.

P501 – Dispose of contents/container to appropriate waste containers.

Pictograms:



3. Composition/Information on Ingredients

Synonyms: Caustic Soda

Formula: NaOH

Molecular Weight: 40.0 g/mol

CAS-No: 1310-73-2

EC-No: 215-185-5

4. First-Aid Measures

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

Route of Exposure

If Swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Get medical attention.

In Case of Skin Contact: Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.

In Case of Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

If Inhaled: Safely remove victim to fresh air. If not breathing, institute cardiopulmonary resuscitation (CPR). If breathing is difficult, ensure clear airway and give oxygen. Get medical attention.

Most Important Symptoms and Effects, Both Acute and Delayed: The most important known symptoms and effects are described in section 2 (Hazards Identification) and/or in section 11 (Toxicological Information).

Recommendation for Immediate Medical Care and Special Treatment Needed: No Data Available

5. Fire-Fighting Measures

Suitable Extinguishing Media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special Protective Equipment and Precautions for Fire-Fighters: Wear self-contained breathing apparatus for firefighting if necessary.

Special Hazards Arising from the Substance or Mixture: Sodium oxides

Additional Information: No Data Available

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

Environmental Precautions: Prevent further leakage or spillage if safe to do so. See section 2 (Hazards Identification) for more information.

Methods and Material for Containment and Cleanup: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. Handling and Storage

Precautions for Safe Handling: Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.

Conditions for Safe Storage: Keep container tightly closed in a dry and well-ventilated place.

Recommended Storage Temperature: 15 to 30 °C

Incompatibilities: Strong oxidizing agents, Strong acids, Organic materials

8. Exposure controls / Personal Protection

OSHA Permissible Exposure Limits (PELs): 2 mg/m^3

ACGIH Threshold Limit Values (TLVs): 2 mg/m^3

Engineering controls: Practice general industrial hygiene. Ensure adequate ventilation, especially in confined areas.

Personal Protective Equipment (PPE):

Eye/face protection: Face shield or appropriate safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

Skin Protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Body protection: Wear lab coat, gown, or coveralls to protect from exposure.

9. Physical and Chemical Properties

Appearance: White Pellets

pH: ~14 (10%, H_2O)

Solubility: Soluble in Water

Specific Gravity: No Data Available

Melting Range: 318 °C (604 °F)

Odor: No Data Available

Odor Threshold: No Data Available

Viscosity: No Data Available

Relative Density: 2.13 g/cm^3 at 20 °C (68 °F)

Evaporation Rate: No Data Available

Initial Boiling Point and Boiling Range: 1,390 °C (2,534 °F) at 1,013 hPa

Flash Point: No Data Available

Flammability (Solid, gas): Product is not flammable

Flammability Upper/Lower Limits: No Data Available

Partition Coefficient: No Data Available

Vapor Density: 1.38 - (Air = 1.0)

Vapor Pressure: < 24.00 hPa at 20 °C (68 °F)

4.00 hPa at 37 °C(99 °F)

Auto-ignition Temperature: No Data Available

Decomposition Temperature: No Data Available

10. Stability and Reactivity

Reactivity: No Data Available

Chemical Stability: Stable under recommended storage conditions.

Possibilities of Hazardous Reactions: No Data Available

Conditions to Avoid: No Data Available

Incompatible Materials: Strong oxidizing agents, Strong acids, Organic materials

Hazardous Decomposition Productions: Hazardous decomposition products formed under fire conditions. - Sodium oxides

In the event of fire: see section 5

11. Toxicological Information:

Toxicity: No Data Available

Carcinogenicity:

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive Toxicity: No Data Available

Symptoms Associated with Overexposure: No Data Available

Specific Target Organ Toxicity – Single Exposure: No Data Available

Specific Target Organ Toxicity – Repeated Exposure: No Data Available

Target Organs: None Identified

Medical Conditions Aggravated by Exposure: None Identified

Routes of Entry: No Data Available

NIOSH/RTECS: WB4900000

12. Ecological Information

Toxicity: Toxicity to fish LC50 - Gambusia affinis (Mosquito fish) - 125 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates EC50 - Ceriodaphnia (water flea) - 40.4 mg/l - 48 h

Toxicity to bacteria EC50 - Photobacterium phosphoreum - 22 mg/l - 15 min

Persistence and Degradability: No Data Available

Bioaccumulative Potential: No Data Available

Mobility in Soil: No Data Available

Results of PBT and vPvB: PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

Other Adverse Effects: An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Harmful to aquatic life.

Harmful effect due to pH shift.

Forms corrosive mixtures with water even if diluted.

Neutralization possible in waste water treatment plants.

Discharge into the environment must be avoided.

13. Disposal Considerations

Disposal of Product: Dispose in accordance with all applicable federal, state, and local environmental regulations. See Section 2 (Hazards Identification) for additional guidelines in disposals.

Disposal of Packaging: Dispose of as unused product.

14. Transport Information

DOT (US):

Proper Shipping Name: Sodium Hydroxide, solid

UN/NA number: 1823 Class: 8 Packaging group: II Hazard Label: N/A

Reportable Quantity (RQ): 1000 lbs

Poison Inhalation Hazard: No

IMDG:

Proper Shipping Name: SODIUM HYDROXIDE, SOLID

UN number: 1823 Class: 8 Packaging group: II Hazard Label: N/A

IATA:

Proper Shipping Name: Sodium Hydroxide, solid

UN Number: 1823 Class: 8 Packaging group: II Hazard Label: N/A

15. Regulatory Information

TSCA: Listed

SARA Title lll:

Section 302 (EHS) Ingredients: No

Section 313 Ingredients: No

Section 304 (EHS/CERCLA) Ingredients: No

Section 311/312 Hazard: No

16. Other Information

Further Information: All chemicals may pose unknown hazards and should be used with caution. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Caisson Laboratories, Inc. assumes no responsibility for the completeness or accuracy of the information contained herein.

SP-CN-S004 Revision Change Summary:

Rev.	Date	CR#	Approved	Change description
00	**20-Aug-20**	3554	E. Welker	New Document