

## SAFETY DATA SHEET

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

#### 1.1 Product identifiers

|              |                               |
|--------------|-------------------------------|
| Product name | Sodium Hydroxide 50% 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<br>12501 Pauls Valley Road<br>Austin, Texas 78737<br>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)

|                                   |             |
|-----------------------------------|-------------|
| Corrosive to Metals               | Category 1  |
| Skin Corrosion                    | Category 1A |
| Serious Eye Damage                | Category 1  |
| Short-term (Acute) Aquatic Hazard | Category 3  |

#### 2.2 GHS Label elements, including precautionary statements

Pictogram



Signal Word

Danger

Hazard statements

May be corrosive to metals.  
Causes severe skin burns and eye damage.  
Harmful to aquatic life.

Precautionary statements

Prevention: Do not breathe dust/fume/gas/mist/vapors/spray. Wash face, hands, and any exposed skin thoroughly after handling. Wear protective gloves/protective clothing/eye protection/face protection. Use only outdoors or in a well-ventilated area. Keep only in original container. Avoid release to the environment.

Response: Immediately call a POISON CENTER or doctor/physician.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse.

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

IF SWALLOWED: Rinse mouth. DO NOT induce vomiting.

Spills: Absorb spillage to prevent material damage.

Storage: Store locked up. Store in a well-ventilated place. Keep container tightly closed. Store in corrosive-resistant polypropylene container with a resistant inliner. Store in a dry place.

Disposal: Dispose of contents/container to an approved waste disposal plant.

### 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 |
|------------------|--------------------------|------------|---------------|
| Water            | Aqua; H <sub>2</sub> O   | 7732-18-5  | 50%           |
| Sodium hydroxide | Caustic soda; Lye        | 1310-73-2  | 50%           |

---

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

#### General advice

|                                |  |
|--------------------------------|--|
| <b>If inhaled</b>              | Remove to fresh air. Call physician.   |
| <b>In case of skin contact</b> | Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a physician immediately.                                      |
| <b>In case of eye contact</b>  | Rinse out with plenty of water. Immediately call in ophthalmologist. Remove contact lenses.  |
| <b>If swallowed</b>            | Make victim drink water (two glasses at most), avoid vomiting (risk of perforation). Call a physician immediately. Do not attempt to neutralise. |

### 4.2 Most important symptoms and effects, both acute and delayed

Causes burns by all exposure routes. 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.

### 4.3 Indication of any immediate medical attention and special treatment needed

No information available.

## SECTION 5: Firefighting measures

### 5.1 Extinguishing media

|                                       |   |
|---------------------------------------|---|
| <b>Suitable extinguishing media</b>   | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| <b>Unsuitable extinguishing media</b> | No information available.   |

### 5.2 Specific hazards arising from the substance or mixture

Corrosive material. Non-combustible; substance itself does not burn but may decompose upon heating to produce corrosive and/or toxic fumes. Keep product and empty container away from heat and sources of ignition.  
Hazardous Combustion Products: Sodium oxides.

### 5.3 Special protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## 5.4 Further information

**Flash Point** No information available.

**Autoignition Temperature** No information available.

### Explosion limits

**Upper** No data available.

**Lower** No data 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

Wear self-contained breathing apparatus and protective suit. Evacuate personnel to safe areas. Ensure adequate ventilation. Do not get in eyes, on skin, or on clothing.

### 6.2 Environmental precautions

Avoid release to the environment. Do not flush into surface water or sanitary sewer system.

### 6.3 Methods and materials for containment and cleaning up

Wear self-contained breathing apparatus and protective suit. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal.

### 6.4 Reference to other sections

See Section 2 for full list of hazard and precaution statements. See Section 12 for additional Ecological Information.

## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Precautions on safe handling

Use only under a chemical fume hood. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Do not breathe mist/vapors/spray. Do not ingest. If swallowed, seek immediate medical assistance.

#### Hygiene measures

Handle in accordance with good industrial hygiene and safety practice.

## 7.2 Conditions for safe storage, including any incompatibilities

### Storage conditions

Keep containers tightly closed in a dry, cool, and well-ventilated place. Corrosives area.

### Incompatibilities

Acids. Organic materials. Metals.

## 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 | TWA     | 2 mg/m <sup>3</sup> |
|                  | Ceiling | 2 mg/m <sup>3</sup> |

#### US. ACGIH Threshold Limit Values

| Component        | Type    | Value               |
|------------------|---------|---------------------|
| Sodium hydroxide | Ceiling | 2 mg/m <sup>3</sup> |

#### US. NIOSH: Pocket Guide to Chemical Hazards

| Component        | Type    | Value                |
|------------------|---------|----------------------|
| Sodium hydroxide | IDLH    | 10 mg/m <sup>3</sup> |
|                  | Ceiling | 2 mg/m <sup>3</sup>  |

#### Biological occupational exposure limits

No information available.

### 8.2 Exposure controls

#### Appropriate engineering controls

Use only under a chemical fume hood. Ensure adequate ventilation, especially in confined areas. Ensure that eyewash stations and safety showers are close to the workstation location.

#### Personal protective equipment

##### Eye/face protection

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 protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

### Body Protection

Wear appropriate protective gloves and clothing to prevent skin exposure.

### Respiratory protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

Recommended Filter type: Particulates filter conforming to EN 143.

### Control of environmental exposure

Do not let product enter drains.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

|   |                            |
|---|----------------------------|
| Physical State                            | Liquid                     |
| Appearance                                | Colorless                  |
| Odor                                      | No information available   |
| Odor Threshold                            | No information available   |
| pH  | 14                         |
| Melting Point/Range                       | 12 - 15 °C (54 - 59 °F)    |
| Boiling Point/Range                       | 140 -145 °C (284 - 293 °F) |
| Evaporation Rate                          | No information available   |
| Flammability (solid)                      | Not applicable             |
| Flammability or explosive limit           | No data available          |
| Upper                                     |                            |
| Lower                                     |                            |
| Vapor Pressure                            | No information available   |
| Vapor Density                             | No information available   |
| Density                                   | 12.76 lb/gal               |
| Solubility                                | Soluble in water           |
| Partition coefficient;<br>n-octanol/water | No data available          |
| Autoignition Temp                         | No information available   |
| Decomposition Temp                        | No information available   |
| Viscosity                                 | No information available   |
| Molecular Formula                         | NaOH                       |
| Molecular Weight                          | 39.997 g/mol               |
| VOC Content(%)                            | No information available   |
| Oxidizing properties                      | Not oxidizing              |

### 9.2 Other safety information

No information available.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Corrosive to metals. Exothermic reaction with acids.

### 10.2 Chemical stability

Stable under normal conditions.

### 10.3 Possibility of hazardous reactions

No decomposition if stored and applied as directed.

### 10.4 Conditions to avoid

Incompatible products. Excess heat. Freezing temperatures.

### 10.5 Incompatible materials

Water, Acids, Organic materials, Chlorinated solvents, Aluminum, Phosphorus, Tin/tin oxides, Zinc, Metals.

### 10.6 Hazardous decomposition products

Hydrogen. Sodium oxides.

## 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 | 325 mg/kg (Rabbit) | 1350 mg/kg (Rabbit) | -               |

#### Skin corrosion/irritation

Causes severe burns.

#### Serious eye damage/eye irritation

Risk of serious damage to eyes.

#### Respiratory or skin sensitization

No information available.

#### 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**

None known.

**Specific target organ toxicity - repeated exposure**

None known.

**Reproductive toxicity**

No information available.

**Chronic effects**

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**

The toxicological properties have not been fully investigated.

**SECTION 12: Ecological information****12.1 Toxicity**

Do not empty into drains. Large amounts will affect pH and harm aquatic organisms.

| Product          |      | Species                                  | Test Results          |
|------------------|------|--|-----------------------|
| Sodium hydroxide | LC50 | Freshwater Fish<br>(Oncorhynchus mykiss) | 45.4 mg/L, 96h static |

**12.2 Persistence and degradability**

Soluble in water. Persistence is unlikely based on information available.

**12.3 Bio accumulative potential**

No information available.

**12.4 Mobility in soil**

Will likely be mobile in the environment due to its water solubility.

**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        | II                        |

#### IMDG

|                      |                           |
|----------------------|---------------------------|
| UN-no                | UN1824                    |
| Proper Shipping Name | SODIUM HYDROXIDE SOLUTION |
| Hazard Class         | 8                         |
| Packing Group        | II                        |

#### IATA

|                      |                           |
|----------------------|---------------------------|
| UN-no                | UN1824                    |
| Proper Shipping Name | SODIUM HYDROXIDE SOLUTION |
| Hazard Class         | 8                         |
| Packing Group        | II                        |

### 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), RQ: 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**

Acute Health Hazard.

**SARA 313 (TRI reporting)**

Not regulated.

**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: 08/29/2022

Revision 1: 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.