

## 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Sodium Hydroxide 50% Solution ACS Grade

**Synonyms:** sodium hydroxide

**CAS Number:** 1310-73-2

**Grade/Purity:** ACS Reagent Grade

**Product Type:** Bases

**Product Use:** Industrial, Manufacturing or Laboratory use

**Manufacturer/Supplier:** Alliance Chemical, 204 South Edmond St, Taylor, Texas 76574

**Information:** 512-365-6838 | [www.alliancechemical.com](http://www.alliancechemical.com)

**Emergency:** CHEMTEL - 800-255-3924 (24 Hours/Day, 7 Days/Week)

## 2. HAZARDS IDENTIFICATION

**Signal Word:** Danger

**GHS Pictograms:**



**Hazard Statements:**

|      |                                         |
|------|-----------------------------------------|
| H290 | May be corrosive to metals              |
| H314 | Causes severe skin burns and eye damage |

**Precautionary Statements:**

|                |                                                                                                                                  |
|----------------|----------------------------------------------------------------------------------------------------------------------------------|
| P234           | Keep only in original packaging.                                                                                                 |
| P260           | Do not breathe dust, fume, gas, mist, vapours or spray.                                                                          |
| P264           | Wash hands and face thoroughly after handling.                                                                                   |
| P280           | Wear protective gloves, protective clothing, and eye/face protection.                                                            |
| 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      | IF INHALED: Remove person to fresh air and keep comfortable for breathing.                                                       |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310           | Immediately call a POISON CENTER or doctor.                                                                                      |
| P321           | Specific treatment (see first-aid information on this label).                                                                    |
| P363           | Wash contaminated clothing before reuse.                                                                                         |
| P405           | Store locked up.                                                                                                                 |
| P501           | Dispose of contents and container in accordance with local, regional, national, and international regulations.                   |

## 3. COMPOSITION / INFORMATION ON INGREDIENTS

| COMPONENT        | % MIN   | % MAX   | CAS #     | EINECS# / ELINCS# | FORMULA | MOLECULAR WEIGHT |
|------------------|---------|---------|-----------|-------------------|---------|------------------|
| Sodium Hydroxide | 50% w/w | 50% w/w | 1310-73-2 | 215-185-5         | HNaO    | 39.997 g/mol     |

|       |    |    |           |           |                  |             |
|-------|----|----|-----------|-----------|------------------|-------------|
| Water | 50 | 50 | 7732-18-5 | 231-791-2 | H <sub>2</sub> O | 18.02 g/mol |
|-------|----|----|-----------|-----------|------------------|-------------|

#### 4. FIRST-AID MEASURES

|                   |                                                                                                                                                                                        |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eyes</b>       | Rinse with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention immediately.                             |
| <b>Skin</b>       | Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing. Wash with soap. Get medical attention immediately.                                |
| <b>Inhalation</b> | Move person to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately. |
| <b>Ingestion</b>  | Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.                             |

#### 5. FIRE-FIGHTING MEASURES

|                             |                                                                                  |
|-----------------------------|----------------------------------------------------------------------------------|
| <b>Suitable Media</b>       | Dry chemical, CO <sub>2</sub> , water spray. Use water spray to cool containers. |
| <b>Unsuitable Media</b>     | Do not use a solid water stream as it may scatter and spread fire.               |
| <b>Protective Equipment</b> | Wear self-contained breathing apparatus and full protective clothing.            |
| <b>Combustion Products</b>  | May include carbon oxides and other toxic fumes. See Section 10.                 |

#### 6. ACCIDENTAL RELEASE MEASURES

|                                  |                                                                                                         |
|----------------------------------|---------------------------------------------------------------------------------------------------------|
| <b>Personal Precautions</b>      | Use PPE as described in Section 8. Ensure adequate ventilation. Evacuate personnel to safe areas.       |
| <b>Environmental</b>             | Prevent leakage or spillage from entering drains, sewers, or waterways.                                 |
| <b>Containment &amp; Cleanup</b> | Absorb with inert material. Collect in appropriate waste container. Dispose per applicable regulations. |

#### 7. HANDLING AND STORAGE

|                      |                                                                                                                                                                         |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Safe Handling</b> | Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use.                      |
| <b>Safe Storage</b>  | Store in a cool, dry, well-ventilated area. Use corrosion-resistant containers. Keep away from incompatible materials (see Section 10). Keep containers tightly closed. |

#### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Engineering Controls:** Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.

**Occupational Exposure Limits:**

| AGENCY    | EXPOSURE LIMIT              |
|-----------|-----------------------------|
| OSHA PEL  | 2 mg/m <sup>3</sup> TWA     |
| NIOSH REL | 2 mg/m <sup>3</sup> ceiling |
| IDLH      | 10 mg/m <sup>3</sup>        |

|                   |                                                                                                                                                                                                                                                                                           |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Eyes</b>       | Wear chemical safety goggles or face shield.                                                                                                                                                                                                                                              |
| <b>Skin</b>       | Wear chemical-resistant gloves and protective clothing.                                                                                                                                                                                                                                   |
| <b>Inhalation</b> | For mist or aerosol applications (e.g., spray, atomization, pressure washing), use a NIOSH-approved half-face air-purifying respirator with combination acid gas / P100 cartridges. For dust exposure, an N95 or P100 particulate filter is acceptable. Ensure local exhaust ventilation. |

Exposure limits sourced from NIOSH Pocket Guide and OSHA 29 CFR 1910.1000. Hazard classification from ECHA Classification and Labelling Inventory (CLP Annex VI).

#### 9. PHYSICAL AND CHEMICAL PROPERTIES

|                   |                         |
|-------------------|-------------------------|
| <b>Appearance</b> | Clear, colorless liquid |
| <b>Odor</b>       | ... Odorless ...        |

|                          |                                        |
|--------------------------|----------------------------------------|
| Particle Characteristics | Not Applicable                         |
| pH                       | Strongly alkaline (1 % solution)       |
| Melting Point            | Not characterized for the 50% solution |
| Boiling Point            | Not characterized for the 50% solution |
| Flash Point              | Not Available                          |
| Vapor Pressure           | 0 mmHg (approx) (NIOSH, 2024)          |
| Specific Gravity         | 1.53                                   |
| Solubility               | Highly soluble in water and alcohol    |
| Molecular Formula        | HNaO                                   |
| Molecular Weight         | 39.997 g/mol                           |

## 10. STABILITY AND REACTIVITY

|                        |                                                                                   |
|------------------------|-----------------------------------------------------------------------------------|
| Chemical Stability     | Stable under recommended storage conditions.                                      |
| Hazardous Reactions    | None under normal processing conditions.                                          |
| Conditions to Avoid    | Heat, sparks, open flame, and incompatible materials.                             |
| Incompatible Materials | Strong acids, strong bases, reactive metals, water (for some concentrated forms). |
| Decomposition Products | May produce carbon oxides and other toxic fumes when heated to decomposition.     |

## 11. TOXICOLOGICAL INFORMATION

**Acute Toxicity:** See Section 2 for GHS hazard classification.

|      |                           |
|------|---------------------------|
| IARC | Not listed as carcinogen. |
| NTP  | Not listed as carcinogen. |
| OSHA | Not listed as carcinogen. |

## 12. ECOLOGICAL INFORMATION

|                  |                                                                                                                                                                                   |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Ecotoxicity      | Daphnia EC50: 40.38 mg/L (48 h, Ceriodaphnia dubia (<24 h neonate) — pH-driven; 95% CI 34.59–47.13 mg/L); Fish LC50: 125 mg/L (96 h, Gambusia affinis (mosquitofish) — pH-driven) |
| Persistence      | Not applicable (inorganic; dissociates to Na <sup>+</sup> and OH <sup>-</sup> )                                                                                                   |
| Bioaccumulation  | Not Available                                                                                                                                                                     |
| Mobility in Soil | Highly water-soluble                                                                                                                                                              |

## 13. DISPOSAL CONSIDERATIONS

Dispose of contents/container in accordance with applicable federal, state, and local regulations. Do not dispose of into drains or waterways.

## 14. TRANSPORT INFORMATION

|                  |                                             |
|------------------|---------------------------------------------|
| US DOT           | UN1824, Sodium hydroxide solution, 8, PG II |
| IMDG             | UN1824, Sodium hydroxide solution, 8, PG II |
| IATA/ICAO        | UN1824, Sodium hydroxide solution, 8, PG II |
| Marine Pollutant | No                                          |

## 15. REGULATORY INFORMATION

|                    |                                           |
|--------------------|-------------------------------------------|
| TSCA Inventory     | Listed.                                   |
| SARA 313 (TRI)     | Not listed.                               |
| California Prop 65 | Not listed.                               |
| SARA 311/312       | See Section 2 for hazard classifications. |

Data retrieved as of — TSCA Inventory: 2026-08-02; SARA 313 (TRI): 2026-08-02; California Prop 65: 2026-08-02

## 16. OTHER INFORMATION

### Revision Date: 08/25/2026

**Disclaimer:** The information provided in this Safety Data Sheet is correct to the best of our knowledge at the date of publication. It relates only to the specific product identified and does not relate to its use in combination with other materials. ALLIANCE CHEMICAL MAKES NO WARRANTY, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ALLIANCE CHEMICAL DOES NOT ASSUME LIABILITY FOR LOSS, INJURY, DAMAGE, OR EXPENSE ARISING FROM THE HANDLING, STORAGE, USE, OR DISPOSAL OF THIS PRODUCT.