



Safety Data Sheet

Sodium Hydroxide 50%

SECTION 1: Identification

1.1 GHS Product identifier

Product name Sodium Hydroxide 50%

1.2 Other means of identification

Sodium Hydroxide, Alkali, Lye, Soda Lye, Sodium Hydrate, Membrane Caustic Soda

1.3 Recommended use of the chemical and restrictions on use

For laboratory and manufacturing use only.

1.4 Supplier's details

Name High Purity Products
Address 14546 N. Lombard Street
Portland OR 97203
United States of America

Telephone 503-227-1616
email help.desk@highpp.com

1.5 Emergency phone number

CHEMTREC: 1-800-424-9300

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with: OSHA (29 CFR 1910.1200)

- Acute toxicity, oral, Cat. 4
- Eye damage/irritation, Cat. 1
- Skin corrosion/irritation, Cat. 1
- Corrosive to metals, Cat. 1
- Specific target organ toxicity (single exposure), Cat. 3

2.2 GHS label elements, including precautionary statements

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Pictogram



Signal word

Danger

Hazard statement(s)

H290 May be corrosive to metals
H302 Harmful if swallowed
H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage
H335 May cause respiratory irritation

Precautionary statement(s)

P234 Keep only in original container.
P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P261 Avoid breathing dust/fume/gas/mist/vapors/spray.
P264 Wash thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 IF SWALLOWED: Call a POISON CENTER
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/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.
P390 Absorb spillage to prevent material-damage.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

SECTION 3: Composition/information on ingredients

3.1 Mixture

Components	CAS #	Percent (weight)
Sodium Hydroxide	1310-73-2	48-52%
Water	7732-18-5	48-52%

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

If inhaled If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician

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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 swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Product is not flammable. Use appropriate media for adjacent fire. Cool containers with water.

5.2 Specific hazards arising from the chemical

Emits toxic fumes (sodium oxides) under fire conditions. (See also Stability and Reactivity section)

5.3 Special protective actions for fire-fighters

Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear respiratory protection. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

6.2 Environmental precautions

Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

NOISH - REL (Inhalation): (C) 2 mg/m³

OSHA - TWA (Inhalation): 2 mg/m³

8.2 Individual protection measures, such as personal protective equipment (PPE)

Pictograms



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Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination 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.

SECTION 9: Physical and chemical properties and safety characteristics

Physical state	Liquid
Appearance	Colorless Liquid
Color	Colorless
Odor	Odorless
Odor threshold	No data available.
pH	14.0
Melting point/freezing point	-15 °C (59 °F)
Boiling point or initial boiling point and boiling range	145 °C (293 °F)
Flash point	Not Flammable
Evaporation rate	No data available.
Flammability	Not Flammable
Vapor pressure	23.76 mmHg at 25°C
Relative vapor density	No data available.
Density and/or relative density	1.520
Solubility	Completely
Partition coefficient n-octanol/water (log value)	No data available.
Auto-ignition temperature	No data available.
Decomposition temperature	No data available.
Kinematic viscosity	No data available.

Particle characteristics

No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity

None under normal use conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Not Applicable

10.4 Conditions to avoid

Avoid contact with oxidizing agents. Reacts violently with strong acids

10.5 Incompatible materials

Caustic soda reacts with all the mineral acids to form the corresponding salts. It also reacts with weak-acid gases, such as hydrogen sulfide, sulfur dioxide, and carbon dioxide. Caustic soda reacts with amphoteric metals (Al, Zn, Sn) and their oxides to form complex anions such as AlO_2^- , ZnO_2^{2-} , SnO_2^{2-} , and H_2 (or H_2O with oxides). All organic acids also react with sodium hydroxide to form soluble salts. Another common reaction of caustic soda is dehydrochlorination.

10.6 Hazardous decomposition products

Potassium oxides, Sodium oxides

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SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

LD50 - Dermal - rabbit - 1,350 mg/kg

LD50 - Oral - Rat - 140-340 mg/kg

Skin corrosion/irritation

Causes severe skin burns.

Serious eye damage/irritation

Risk of serious damage to eyes.

Respiratory or skin sensitization

Burning, choking, coughing, wheezing, laryngitis, shortness of breath, headache, nausea.

Germ cell mutagenicity

Mutagenic for mammalian somatic cells.

Carcinogenicity

No carcinogenic components identified.

Reproductive toxicity

No data available.

STOT-single exposure

Kidney, Liver, Eyes, Skin, Mucous membranes, Respiratory system, Cardiovascular system

STOT-repeated exposure

No data available.

Aspiration hazard

No data available.

SECTION 12: Ecological information

Toxicity

EC50; Species: Ceriodaphnia dubia (Water Flea) age <24 hr neonate; Conditions: freshwater, static, 23 °C; Concentration: 40380 ug/L for 48 hr (95% confidence interval: 34590-47130 ug/L); Effect: intoxication, immobilization /100% purity

LC50; Species: Carassius auratus (Goldfish); Conditions: freshwater, static; Concentration: 160000 ug/L for 24 hr

Persistence and degradability

Expected to be readily biodegradable.

Bioaccumulative potential

Not expected to bioaccumulate.

Mobility in soil

Relatively high mobility in soil.

SECTION 13: Disposal considerations

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Product disposal

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

EPA Waste Code: **D002**

SECTION 14: Transport information

DOT (US)

UN Number: UN1824

Class: 8

Packing Group: II

Proper Shipping Name: Sodium hydroxide solution

Reportable quantity (RQ): 2,000 lbs

IMDG

UN Number: UN1824

Class: 8

Packing Group: II

Proper Shipping Name: Sodium hydroxide solution

IATA

UN Number: UN1824

Class: 8

Packing Group: II

Proper Shipping Name: Sodium hydroxide solution

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

Massachusetts Right To Know Components

Chemical name: Sodium hydroxide

CAS number: 1310-73-2

New Jersey Right To Know Components

Common name: SODIUM HYDROXIDE

CAS number: 1310-73-2

Pennsylvania Right To Know Components

Chemical name: Sodium hydroxide

CAS number: 1310-73-2

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

Canadian Domestic Substances List (DSL)

Chemical name: Sodium hydroxide (Na(OH))

CAS: 1310-73-2

California Prop. 65 Components

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This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

CERCLA RQ Hazardous Substances

Sodium Hydroxide: 1,000 lbs

HMIS Rating

Sodium Hydroxide 50%	
HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	1
PERSONAL PROTECTION	

NFPA Rating



SECTION 16: Other information

High Purity Products provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose. HIGH PURITY PRODUCTS MAKES NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION ANY WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO THE INFORMATION SET FORTH HEREIN OR THE PRODUCT TO WHICH THE INFORMATION REFERS. ACCORDINGLY, HIGH PURITY PRODUCTS WILL NOT BE RESPONSIBLE FOR DAMAGES RESULTING FROM USE OF OR RELIANCE UPON THIS INFORMATION.