



# SAFETY DATA SHEET

Sodium hydroxide, 50% solution

This SDS is valid for all grades that start with catalog number  
291

## 1. IDENTIFICATION OF SUBSTANCE / MIXTURE AND OF SUPPLIER

**Product Identifier:** High Purity Chemicals  
**Synonyms:** Caustic soda Sodium hydrate Soda lye  
**Other means of identification:** CAS No. 1310-73-2  
EINECS No. 215-185-5

**Recommended use of the chemical and restrictions on use:**

### Supplier Details:

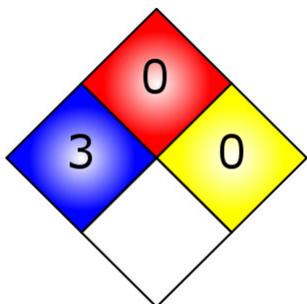
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CCN17213

**Emergency Contact:** CHEMTREC: 1.800.424.9300 (USA) / +1.703.527.3887 (International)

## 2. HAZARDS IDENTIFICATION

**OSHA Hazards:**  
Corrosive

### NFPA



**GHS label elements, including precautionary statements**



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+1.703.527.3887 (INT)**



**Signal Word:**

DANGER!

**Hazard statement(s)**

H315	Causes skin irritation.
H319	Causes serious eye irritation.
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.

**Precautionary statement(s)**

P260	Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.
P280	Wear protective gloves and eye and face protection.
P303 + P361 + P353	IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse skin with water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention.
P310	Immediately call a POISON CENTER or doctor/ physician.

**GHS Classification(s)**

Eye irritation (Category 2)  
Metal corrosion (Category 1)  
Skin irritation (Category 2)  
Skin corrosion (Category 1A)  
Skin corrosion (Category 1B)

**Other hazards which do not result in classification:**

**Potential Health Effects:**

Organ	Description
Eyes	Causes eye burns. Causes severe eye burns.
Ingestion	May be harmful if swallowed.
Inhalation	May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Skin	May be harmful if absorbed through skin. Causes skin burns.

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### 3. COMPOSITION AND INFORMATION ON INGREDIENTS

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Chemical identity:	Sodium hydroxide (50% sln)
Common name / Synonym:	Caustic soda Sodium hydrate Soda lye
CAS number:	1310-73-2
EINECS number:	215-185-5
ICSC number:	0360
RTECS #:	WB4900000
UN #:	1823
EC #:	011-002-00-6

% Weight	Material	CAS
50	Sodium hydroxide	1310-73-2

### 4. FIRST AID MEASURES

#### General advice

Take proper precautions to ensure your own health and safety before attempting rescue and providing first aid. Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

#### Skin

Immediately flush affected area with plenty of water while removing contaminated clothing. Wash contaminated clothing before reuse. Contact a doctor. If irritation persists, get medical attention.

#### Inhalation

Remove person to fresh air. If signs/symptoms continue, get medical attention. Give oxygen or artificial respiration as needed.

#### Eyes

Thoroughly flush the eyes with large amounts of clean low-pressure water for at least 15 minutes, occasionally lifting the upper and lower eyelids. If irritation persists, seek medical attention.

#### Ingestion

DO NOT induce vomiting. If vomiting does occur, have victim lean forward to prevent aspiration. Rinse mouth with water. Seek medical attention. Never give anything by mouth to an unconscious individual.

### 5. FIRE FIGHTING MEASURES

#### Suitable (and unsuitable) extinguishing media:

Substance is noncombustible; use agent most appropriate to extinguish surrounding fire.

#### Specific hazards arising from the chemical (e.g., nature of any hazardous combustion products):

Carbon oxides expected to be the primary hazardous combustion product.



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**Special protective equipment and precautions for firefighters: +1.703.527.3887 (INT)**  
 Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Keep unopened containers cool by spraying with water.

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures:

Wear respiratory protection. Do not inhale vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

### Environmental precautions:

Stop leak. Contain spill if possible and safe to do so. Prevent product from entering drains.

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

Absorb with an inert dry material and place in an appropriate waste disposal container. Keep disposal containers closed when finished.

## 7. HANDLING AND STORAGE

### Precautions for safe handling:

Do not inhale vapor or mist.

### Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a dry and well-ventilated place. Do not store with materials which react with NaOH.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### Control parameters, e.g., occupational exposure limit values or biological limit values:

#### Occupational Exposure Limits

Component	Source	Type	Value	Note
Sodium hydroxide	USA (ACGIH)	C	2 mg/m <sup>3</sup>	ACGIH Threshold Limit Value
Sodium hydroxide	US (OSHA)	TWA	2mg/m <sup>3</sup>	29 CFR 1910.1000 Table Z-1 Limits for Air Contaminants

### Appropriate engineering controls:

General room or local exhaust ventilation is usually required to meet exposure limit(s). Electrical equipment should be grounded and conform to applicable electrical code.

### Individual protection measures, such as personal protective equipment:

#### Respiratory protection:

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose

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combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. **1.703.921.3867 (INT)**  
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).

**Hand protection:**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) 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.

**Eye 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 and body protection:**

Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

**Hygiene measures:**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance (physical state, color, etc.)</b>	Water white to slightly gray solution
<b>pH</b>	14
<b>Freezing point</b>	-12 - 10 °C (10 - 50 °F)
<b>Initial boiling point and boiling range</b>	105 - 140 °C (221 - 284 °F)
<b>Vapor pressure</b>	< 24 hPa (< 18 mmHg) at 20 °C (68 °F)
<b>Vapor Density</b>	1.38
<b>Relative Density</b>	1.515 g/mL at 25 °C (77 °F)
<b>Solubility(ies)</b>	completely miscible, soluble
<b>Formula (SODIUM HYDROXIDE)</b>	HNaO
<b>Molecular Weight (SODIUM HYDROXIDE)</b>	40.00 g/mol

## 10. STABILITY AND REACTIVITY

<b>Possibility of hazardous reactions</b>	No data available
<b>Conditions to avoid (e.g., static discharge, shock or vibration)</b>	Water, acids, Organic materials, Chlorinated solvents, Aluminum, Phosphorus, Tin/tin oxides, Zinc
<b>Incompatible materials</b>	Acids/Flammable liquids/Organig halogen compounds/Metals
<b>Hazardous decomposition products</b>	Hazardous decomposition products formed under fire conditions. - Oxides of phosphorus, Sodium oxides



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## 11. TOXICOLOGICAL INFORMATION

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- Sodium hydroxide, 50% sln 1310-73-2

### Product Summary:

No data available for the teratogenic, mutagenic, or reproductive toxicity effects of the product.

### Carcinogenicity

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

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

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.

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.

## 12. ECOLOGICAL INFORMATION

- Sodium hydroxide, 50% sln 1310-73-2

### Other adverse effects:

An environmental hazard could occur if product is handled or disposed of improperly.

## 13. DISPOSAL CONSIDERATIONS

Description of waste residues and information on their safe handling and methods of disposal, including the disposal of any contaminated packaging:

Offer unused and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of the product. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

## 14. TRANSPORT INFORMATION

Description of waste residues and information on their safe handling and methods of disposal:

UN number	1824
UN proper shipping name	Sodium hydroxide solution
Transport hazard class(es)	8
Packing group (if applicable)	II



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**Reportable Quantity**

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30 L

**IMDG**

UN-Number: 1824 Class: 8 Packing Group: II

EMS-No: F-E, S-B

Proper shipping name: SODIUM HYDROXIDE SOLUTION

Marine pollutant: No

**IATA**

UN-Number: 1824 Class: 8 Packing Group: II

Proper shipping name: Sodium hydroxide solution

**15. REGULATORY INFORMATION**

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

**OSHA Hazards**

Corrosive

All ingredients are on the following inventories or are exempted from listing

Country	Notification
Australia	AICS
Canada	DSL
China	IECS
European Union	EINECS
Japan	ENCS/ISHL
Korea	ECL
New Zealand	NZIoC
Philippines	PICCS
United States of America	TSCA

**SARA 302 Components**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards**

Acute Health Hazard

**Massachusetts Right To Know Components**

Sodium hydroxide CAS-No. 1310-73-2 Revision Date 2007-03-01



**PHARMCO**  
by Greenfield Global

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**Pennsylvania Right To Know Components** **+1.703.527.3887 (INT)**

Sodium hydroxide CAS-No. 1310-73-2 Revision Date 2007-03-01

**New Jersey Right To Know Components**

Sodium hydroxide CAS-No. 1310-73-2 Revision Date 2007-03-01

**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.

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**16. OTHER INFORMATION:  
INCLUDING INFORMATION ON PREPARATION AND REVISION OF THE SDS**

**Disclaimer**

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