

**Section 1: Product & Company Information**

**Product Identifier:** Sodium Hydroxide, 10% Solution

**Other Means of Identification**

Product Number: No data available.

**Recommended Use and Restrictions on Use**

Recommended Use: Pulping and Bleaching, pH Neutralizer, Detergent, Soaps.

Restrictions on Use: None known.

**Manufacturer / Importer / Supplier / Distributor Information**

**Company Name:** CORECHEM Inc.

**Address:** 4320 Greenway Drive  
Knoxville, TN 37918  
USA

**Information Telephone Number:** 1-865-524-4239

**Fax Number:** 1-865-524-3375

**Website:** www.corecheminc.com

**Contact Person:** Regulatory Manager

**E-mail:** regulatory@corecheminc.com

**Emergency Phone Number:** Chemtrec® 1-800-424-9300 / Outside USA 1-703-527-3887 (monitored 24 hours/day)

**Section 2: Hazards Identification**

**GHS Hazard Classification(s)**

In accordance with OSHA Hazard Communication Standard 29 CFR 1910.1200 (HazCom 2012).

**Physical Hazard(s)**

Corrosive to Metals - 1

**Health Hazard(s)**

Corrosion/Irritation, Skin - 1A

(Corrosion)Damage/Irritation, Eye - 1

**Environmental Hazard(s)**

Not classified.

**Label Elements**

**Signal Word**

**DANGER**

**Hazard Symbol(s)**



**Hazard Statement(s)**

H290: May be corrosive to metals.

H314: Causes severe skin burns and eye damage.

H318: Causes serious eye damage.

**Precautionary Statements**

**General**

Not applicable.

**Prevention**

P234: Keep only in original container.

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

P264: Wash face, hands and any exposed skin thoroughly after handling.

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

**Response**

P301 + P330 + P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

P303 + P361 + P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

P304 + P340: IF INHALED: Remove to fresh air and keep at rest in a position 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/physician.

P321: Specific treatment (see supplemental first aid instructions on this label).

P363: Wash contaminated clothing before reuse.

P390: Absorb spillage to prevent material damage.

**Storage**

P405: Store locked up.  
P406: Store in corrosive resistant container with a resistant inner liner.

**Disposal**

P501: Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

**Hazard(s) not otherwise classified (HNOC)**

None known.

**Section 3: Composition/Information on Ingredients**

**Substance**

Chemical Identity <sup>2</sup>	Common Name/Synonym(s)	CAS # <sup>3</sup>	Weight %	Impurity or Stabilizing Additive
Sodium Hydroxide	Caustic Soda, Caustic, Alkali, Lye, Caustic Lye, Caustic Soda, Soda Lye, Liquid Caustic, Sodium Hydrate	1310-73-2	5 - 15%	No

- Information regarding the composition and the percent ranges of the mixtures ingredients are not presented as it Confidential Business Information (CBI). Where a medical emergency exists (as determined by medical professional), timely disclosure of CBI is assured. The information omitted pertains to only the names of the substances and the concentration in the mixture (product) and can only be requested by a doctor/physician or Local/State/Provincial or Federal Authority.
- Non-hazardous ingredients are not presented as to protect the proprietary formula of the product.
- “—”Indicates ingredient is a mixture and contains multiple ingredients or may have no identifying CAS number.

**Section 4: First-Aid Measures**

**General Information**

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label if possible).

**Inhalation**

Remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

**Skin Contact**

Immediately flush skin with plenty of water for at least 60 minutes. Remove contaminated clothing. Get immediate medical advice/attention. Wash contaminated clothing before reuse.

**Eye Contact**

Rinse cautiously with water for at least 60 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get immediate medical advice/attention.

**Ingestion**

Do NOT induce vomiting. Rinse mouth. Immediately call a POISON CENTER or doctor/physician.

**Most important symptoms/effects, acute and delayed**

**Symptoms**

Burning pain and severe corrosive skin damage. Permanent eye damage including blindness could result. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Shortness of breath.

**Indication of immediate medical attention and special treatment needed**

**Hazards**

No data available.

**Treatment**

Provide general supportive measures and treat symptomatically. Symptoms may be delayed. Keep victim under observation.

**Section 5: Fire-Fighting Measures**

**General Fire Hazards**

No unusual fire or explosion hazards noted.

**Suitable (and Unsuitable) Extinguishing Media**

**Suitable Extinguishing Media**

Water fog. Foam. Dry chemical powder. Carbon dioxide. Use extinguishing agent suitable for type of surrounding fire.

**Unsuitable Extinguishing Media**

Do not use a solid water stream as it may scatter and spread fire. Do not use halogenated extinguishing agents.

**Specific Hazards Arising from the Chemical**

The product itself does not burn. May decompose upon heating to produce corrosive and/or toxic fumes. Contact with metal may release flammable hydrogen gas.

**Special Protective Equipment and Precautions for Firefighters**

**Special Fire-Fighting Equipment Procedures**

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers.

**Special Protective Equipment for Fire-Fighters**

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

**Section 6: Accidental Release Measures**

**Personal Precautions, Protective Equipment and Emergency Procedures**

Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained.

**Methods and Materials for Containment and Clean-Up**

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Collect spillage.  
Methods for Cleaning Up: Clean up spills immediately and dispose of waste safely. Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal.

**Notification Procedures**

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations.

**Environmental Precautions**

Avoid discharge into drains, water courses or onto the ground.

**Section 7: Handling and Storage**

**Precautions for Safe Handling**

Do not get in eyes, on skin, or on clothing. Do not breathe vapors, mist, or spray.  
Additional Hazards When Processed: May release corrosive vapors.  
Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

**Conditions for Safe Storage, including any Incompatibilities**

Technical Measures: Comply with applicable regulations.  
Storage Conditions: Store in a dry, cool and well-ventilated place. Keep container closed when not in use. Keep/Store away from extremely high or low temperatures and incompatible materials.  
Incompatible Materials: Strong acids. Strong oxidizers. Metals.  
Special Rules on Packaging: Store in original container or corrosive resistant and/or lined container.

**Section 8: Exposure Controls/Personal Protection**

**Control Parameters**

**Occupational Exposure Limits**

Chemical Identity	Type	Value	Source
Sodium Hydroxide	PEL	2 mg/m <sup>3</sup>	US OSHA Table Z-1
Sodium Hydroxide	Ceiling	2 mg/m <sup>3</sup>	US. ACGIH Threshold Limit Values

**Biological Limit Values**

The product does not contain any relevant quantities of hazardous materials with assigned biological limit values.

**Appropriate Engineering Controls**

No data available.

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

**General Information**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

**Eye/Face Protection**

Wear chemical goggles and face shield.

**Skin Protection**

**Hand Protection**

Wear appropriate chemical resistant gloves.

**Other**

Wear appropriate chemical resistant clothing.

**Respiratory Protection**

If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

**Hygiene Measures**

When using, do not eat, drink or smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated footwear that cannot be cleaned. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before reuse. Avoid contact with eyes, skin, and clothing.

**Section 9: Physical and Chemical Properties**

**Appearance:**

Physical State: Liquid  
Color: Clear to Hazy White

<b>Odor:</b>	Odorless
<b>Odor Threshold:</b>	No data available.
<b>pH:</b>	ca.13.8 at 20 °C (68 °F)
<b>Melting Point/Freezing Point:</b>	50 - 53 °F (10 - 11.67 °C) (50% solution)
<b>Initial Boiling Point and Boiling Range:</b>	266 - 284 °F (130 - 140 °C) (50% solution)
<b>Flash Point:</b>	Not applicable.
<b>Evaporation Rate (butyl acetate=1):</b>	No data available.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/Lower Limit on Flammability or Explosive Limits</b>	
Flammability Limit – Upper:	No data available.
Flammability Limit – Lower:	No data available.
Explosive Limit – Upper:	No data available.
Explosive Limit – Lower:	No data available.
<b>Vapor Pressure:</b>	No data available.
<b>Vapor Density (air =1):</b>	No data available.
<b>Relative Density (water=1):</b>	1.11 g/cm <sup>3</sup> at 20 °C (68 °F)
<b>Solubility(ies):</b>	
Solubility in water:	Completely miscible with water.
Solubility (other):	No data available.
<b>Partition coefficient (n-octanol/water):</b>	No data available.
<b>Auto-Ignition Temperature:</b>	No data available.
<b>Decomposition Temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>Other Information:</b>	
Molecular Weight:	No data available.
Formula:	NaOH

## Section 10: Stability and Reactivity

### Reactivity

May be corrosive to metals. Contact with metals may evolve flammable hydrogen gas. May react exothermically with water releasing heat. Adding an acid to a base or base to an acid may cause a violent reaction.

### Chemical Stability

Material is stable under normal conditions.

### Possibility of Hazardous Reactions

Hazardous polymerization does not occur.

### Conditions to Avoid

Reacts violently with strong acids. This product may react with oxidizing agents. Do not mix with other chemicals. Corrosive to aluminum, tin, zinc, copper and most alloys in which they are present including brass and bronze. Corrosive to steels at elevated temperatures above 40°C (104°F).

### Incompatible Materials

Oxidizing agents. Acids. Phosphorus. Aluminum. Zinc. Tin. Initiates or catalyzes violent polymerization of acetaldehyde, acrolein or acrylonitrile.

### Hazardous Decomposition Products

Contact with metals (aluminum, zinc, tin) and sodium tetrahydroborate liberates hydrogen gas.

## Section 11: Toxicological Information

### Information on routes of exposure

**Ingestion:** Causes digestive tract burns. Harmful if swallowed.

**Inhalation:** May cause irritation to the respiratory system.

**Skin Contact:** Causes severe skin burns.

**Eye Contact:** Causes severe eye burns and damage.

### Information on Toxicological Effects

#### Acute Toxicity (List all possible routes of exposure)

##### Oral

Sodium Hydroxide: LD50 (Rat): 300 – 500 mg/kg

##### Dermal

Sodium Hydroxide: LD50 (Rabbit): > 2 g/kg

##### Inhalation

No data available.

##### Repeated Dose Toxicity

Sodium Hydroxide: (Mouse): 40 mg/kg, intraperitoneal

### Skin Corrosion/Irritation

Causes severe skin burns.

### Serious Eye Damage/Eye Irritation

Causes severe eye burns and damage.

**Respiratory/Skin Sensitization**

No data available.

**Carcinogenicity**

**IARC Monographs on the Evaluation of Carcinogenic Risks to Humans**

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.

**US. National Toxicology Program (NTP) Report on Carcinogens**

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.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1052)**

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.

**Germ Cell Mutagenicity**

**In Vitro**

No mutagenic components identified.

**In Vivo**

No mutagenic components identified.

**Reproductive Toxicity**

None known.

**Specific Target Organ Toxicity – Single Exposure**

None known.

**Specific Target Organ Toxicity – Repeated Exposure**

None known.

**Aspiration Hazard**

Droplets of the product aspirated into the lungs through ingestion or vomiting may cause serious chemical pneumonia.

**Other Effects**

None known.

**Section 12: Ecological Information**

**Ecotoxicity**

**Acute Hazards to the Aquatic Environment**

**Fish**

Sodium Hydroxide: LC50 (Bluegill (*Lepomis Macrochirus*), 48 h): 99 mg/l  
Sodium Hydroxide: LC50 (Mosquitofish (*Gambusia Affinis Affinis*), 96 h): 125 mg/l

**Aquatic Invertebrates**

No data available.

**Toxicity to Aquatic Plants**

No data available.

**Chronic Hazards to the Aquatic Environment**

**Fish**

No data available.

**Aquatic Invertebrates**

No data available.

**Toxicity to Aquatic Plants**

No data available.

**Persistence and Degradability**

**Biodegradation**

Expected to degrade rapidly in air.

**BOD/COD Ratio**

No data available.

**Bioaccumulative Potential**

**Bioconcentration Factor (BCF)**

No data available on bioaccumulation.

**Partition Coefficient n-octanol / water (log Kow)**

No data available.

**Mobility in Soil**

No data available.

**Other Adverse Effects**

None known.

**Section 13: Disposal Considerations**

## Disposal Instructions

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.

## Contaminated Packaging

Handle contaminated packages in the same way as the substance itself. Emptied containers may retain hazardous residue and explosive vapors. Keep away from heat, sparks, and flames. Do not cut, puncture, or weld on or near this container. Follow label warnings until container is thoroughly cleaned or destroyed.

## Section 14: Transportation Information

### US Department of Transportation (DOT)

UN Number: UN1824  
UN Proper Shipping Name: Sodium Hydroxide Solution  
Technical Name: -  
Hazard Class: 8  
Subsidiary Hazard Risk: -  
Packing Group: II  
DOT Label/Placard Exemptions: Not determined  
Special Provisions: B2, IB2, N34, T7, TP2  
Packaging Exceptions: 49CFR 173.154  
Packaging Non-Bulk: 49CFR 173.202  
Packaging Bulk: 49CFR 173.242  
Reportable Quantity (RQ): 1,000lb (454kg)  
Marine Pollutant: No  
Poison Inhalation Hazard: No  
Special precautions for user: Transport within user's premises: always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.  
Emergency Response Guidebook (ERG) #: 154

*Important Note: Shipping descriptions may vary based on mode of transport, quantities, package size, and/or origin and destination. Consult your company's Hazardous Materials/Dangerous Goods expert for information specific to your situation.*

## Section 15: Regulatory Information

### US Federal Regulations

#### Toxic Substance Control Act (TSCA), Chemical Substance Inventory, Section 8(b)

This product or ingredient(s) are listed on the TSCA inventory. Any impurities present in this product are exempt from listing.

#### Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) Hazardous Substance List (40 CFR 302.4)

The following chemical(s) in this material are subject to reporting levels established by CERCLA:  
Sodium Hydroxide (CAS# 1310-73-2)

#### Clean Air Act (CAA), Section 112(r)

No chemical(s) in this material are subject to the reporting requirements of CAA.

#### Emergency Planning and Community Right-To-Know Act (EPCRA)

##### EPCRA 302 Extremely Hazardous Substance

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 302.

##### EPCRA 304 Emergency Response Notification

No chemical(s) in this material are subject to the reporting requirements of SARA Title III, Section 304.

##### EPCRA 311/312 Emergency and Hazardous Materials Reporting

Fire Hazard: No  
Sudden Release of Pressure: No  
Reactive: No  
Acute (Immediate) Health Hazard: Yes  
Chronic (Delayed) Health Hazard: No

##### EPCRA 313 Toxic Chemical Release Inventory (TRI) Reporting

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

### US State Regulations

#### California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65)

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

*Important Note: Due to the changing nature of regulatory requirements, the information in this document should NOT be considered all-inclusive or authoritative. Users should make their own investigations to determine the suitability of the information for their particular purposes. International, Federal, State and Local regulations should be consulted to determine compliance with all required reporting requirements.*

## Section 16: Other Information

### Hazardous Materials Identification System (HMIS®) Classification

Health Hazard: 3

Chronic Health Hazard: /

**Flammability: 0**

**Physical Hazard: 1**

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

**National Fire Protection Association (NFPA 704) Rating**

**Health Hazard: 3**

**Fire Hazard: 0**

**Reactivity Hazard: 1**

**Special: N/A**

(Hazard Rating: 0 – Minimal / 1 – Slight / 2 – Moderate / 3 – Serious / 4 – Severe)

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Revisions: -

**Key to Abbreviations and Acronyms**

ATE - Acute Toxicity Estimate

BCF - Bioconcentration Factor

EC50 - Effective concentration, 50%

IDHL – Immediately Dangerous to Life and Health

Kg – Kilogram

l – Liter

lb – Pound

LC50 - Lethal Concentration, 50%

LD50 - Lethal Dose, 50%

mg - milligram

ml – milliliter

N/A – Not Applicable

N/D – Not Determined

PEL – Permissible Exposure Limit

REL – Recommended Exposure Limit

STEL – Short-term Exposure Limit

TWA - Time weighted average

ACGIH - American Conference of Industrial Hygienists

AIHA – American Industrial Hygiene Association

BEI - Biological Exposure Indices

CAS – Chemical Abstracts Service

DOT – US Department of Transportation

EPA – US Environmental Protection Agency

GHS - Globally Harmonized System of Classification and Labelling of Chemicals

IARC - International Agency for Research on Cancer

IATA - International Air Transport Association

IBC - Intermediate Bulk Container

IMDG - International Maritime Dangerous Goods

NIOSH – National Institute for Occupational Safety and Health

NTP – National Toxicology Program

OSHA – US Occupational Health and Safety Administration

SARA – US EPA Superfund Amendments and Reauthorization Act

TSCA – US EPA Toxic Substances Control Act

UN - United Nations

**References**

HSDB® - Hazardous Substances Data Bank

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