

# Caustic Soda 50%

## Safety Data Sheet

According to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision Date: 05/08/15

Date of Issue: 05/08/15

Version: 1.0

### SECTION 1: IDENTIFICATION

#### Product Identifier

**Product Form:** Mixture

**Product Name:** Caustic Soda 50%

**Other Generic Names:** Sodium Hydroxide; Lye

#### Intended Use of the Product

Neutralizer and alkalinity control in analytical chemistry. Absorption of NO<sub>x</sub>, SO<sub>3</sub> and CO<sub>2</sub> in gas streams. Manufacture of high-purity sodium compounds. Etchant in semiconductor wet processing. Photo-engraving and lithography. Hydrolyzing fats in soaps. Bleaching textiles and mercerizing cotton.

#### Name, Address, and Telephone of the Responsible Party

##### **Manufacturer**

CHEMTRADE LOGISTICS INC.

155 Gordon Baker Road

Suite 300

Toronto, Ontario M2H 3N5

For SDS Info: (416) 496-5856

[www.chemtradelogistics.com](http://www.chemtradelogistics.com)

#### Emergency Telephone Number

**Emergency Number** :

Canada: CANUTEC +1-613-996-6666 / US: CHEMTREC +1-800-424-9300

Chemtrade Emergency Contact: (866) 416-4404

For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, call CHEMTREC – Day or Night

### SECTION 2: HAZARDS IDENTIFICATION

#### Classification of the Substance or Mixture

##### **Classification (GHS-US)**

Met. Corr. 1 H290

Skin Corr. 1A H314

Eye Dam. 1 H318

Aquatic Acute 3 H402

Full text of H-phrases: see section 16

#### Label Elements

##### **GHS-US Labeling**

##### **Hazard Pictograms (GHS-US)**

:



GHS05

##### **Signal Word (GHS-US)**

: Danger

##### **Hazard Statements (GHS-US)**

: H290 - May be corrosive to metals

H314 - Causes severe skin burns and eye damage

H318 - Causes serious eye damage

H402 - Harmful to aquatic life

##### **Precautionary Statements (GHS-US)**

: P234 - Keep only in original container.

P260 - Do not breathe vapors, mist, spray.

P264 - Wash hands, forearms, and exposed areas thoroughly after handling.

P273 - Avoid release to the environment.

P280 - Wear eye protection, protective clothing, protective gloves, 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/shower.

P304+P340 - IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

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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/doctor.  
P321 - Specific treatment (see Section 4).  
P363 - Wash contaminated clothing before reuse.  
P390 - Absorb spillage to prevent material damage.  
P405 - Store locked up.  
P406 - Store in corrosive resistant container with a resistant inner liner.  
P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

### Other Hazards

**Other Hazards Not Contributing to the Classification:** Exposure may aggravate those with pre-existing eye, skin, or respiratory conditions.

**Unknown Acute Toxicity (GHS-US)** Not available

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Name	Product identifier	% (w/w)	Classification (GHS-US)
Water	(CAS No) 7732-18-5	49 - 51	Not classified
Sodium hydroxide	(CAS No) 1310-73-2	49 - 51	Met. Corr. 1, H290 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402

Full text of H-phrases: see section 16

## SECTION 4: FIRST AID MEASURES

### Description of First Aid Measures

**General:** 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. Immediately call a POISON CENTER or doctor. 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. Obtain medical attention.

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

### Most Important Symptoms and Effects Both Acute and Delayed

**General:** Causes severe skin burns and eye damage.

**Inhalation:** Contact may cause immediate severe irritation progressing quickly to chemical burns.

**Skin Contact:** Corrosive. Causes burns.

**Eye Contact:** Causes serious eye damage.

**Ingestion:** May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

**Chronic Symptoms:** None expected under normal conditions of use.

### Indication of Any Immediate Medical Attention and Special Treatment Needed

If you feel unwell, seek medical advice (show the label where possible).

## SECTION 5: FIRE-FIGHTING MEASURES

### Extinguishing Media

**Suitable Extinguishing Media:** Use extinguishing media appropriate for surrounding fire.

**Unsuitable Extinguishing Media:** Do not use a heavy water stream. Use of heavy stream of water may spread fire.

### Special Hazards Arising From the Substance or Mixture

**Fire Hazard:** Not flammable.

**Explosion Hazard:** Product is not explosive.

**Reactivity:** May be corrosive to metals. Contact with metals may evolve flammable hydrogen gas.

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### Advice for Firefighters

**Precautionary Measures Fire:** Exercise caution when fighting any chemical fire.

**Firefighting Instructions:** Use water spray or fog for cooling exposed containers.

**Protection During Firefighting:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Hazardous Combustion Products:** Corrosive vapors.

### Reference to Other Sections

Refer to section 9 for flammability properties.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

### Personal Precautions, Protective Equipment and Emergency Procedures

**General Measures:** Avoid all contact with skin, eyes, or clothing. Avoid breathing (vapor, mist, spray).

#### For Non-Emergency Personnel

**Protective Equipment:** Use appropriate personal protection equipment (PPE).

**Emergency Procedures:** Evacuate unnecessary personnel.

#### For Emergency Personnel

**Protective Equipment:** Equip cleanup crew with proper protection.

**Emergency Procedures:** Stop leak if safe to do so. Ventilate area.

### Environmental Precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### Methods and Material for Containment and Cleaning 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:** Clear up spills immediately and dispose of waste safely. Spills should be contained with mechanical barriers. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

### Reference to Other Sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: HANDLING AND STORAGE

### Precautions for Safe Handling

**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 direct sunlight, extremely high or low temperatures and incompatible materials. Store locked up.

**Incompatible Materials:** Strong acids. Strong oxidizers. Metals.

**Special Rules on Packaging:** Store in original container or corrosive resistant and/or lined container.

### Specific End Use(s)

Neutralizer and alkalinity control in analytical chemistry. Absorption of NO<sub>x</sub>, SO<sub>3</sub> and CO<sub>2</sub> in gas streams. Manufacture of high-purity sodium compounds. Etchant in semiconductor wet processing. Photo-engraving and lithography. Hydrolyzing fats in soaps. Bleaching textiles and mercerizing cotton.

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control Parameters

For substances listed in section 3 that are not listed here, there are no established Exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), NIOSH (REL), OSHA (PEL), Canadian provincial governments, or the Mexican government.

Sodium hydroxide (1310-73-2)		
Mexico	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA ACGIH	ACGIH Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA NIOSH	NIOSH REL (ceiling) (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
USA IDLH	US IDLH (mg/m <sup>3</sup> )	10 mg/m <sup>3</sup>
Alberta	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
British Columbia	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>

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Manitoba	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
New Brunswick	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Newfoundland & Labrador	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Nova Scotia	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Nunavut	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Northwest Territories	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Ontario	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Prince Edward Island	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Québec	PLAFOND (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Saskatchewan	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>
Yukon	OEL Ceiling (mg/m <sup>3</sup> )	2 mg/m <sup>3</sup>

### Exposure Controls

**Appropriate Engineering Controls:** Ensure adequate ventilation, especially in confined areas. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure all national/local regulations are observed.

**Personal Protective Equipment:** Protective goggles. Gloves. Protective clothing. Face shield. Insufficient ventilation: wear respiratory protection.

**Materials for Protective Clothing:** Chemically resistant materials and fabrics.

**Hand Protection:** Wear chemically resistant protective gloves.

**Eye Protection:** Chemical safety goggles and face shield.

**Skin and Body Protection:** Wear suitable protective clothing.

**Respiratory Protection:** In case of insufficient ventilation, wear suitable respiratory equipment.

**Environmental Exposure Controls:** Do not allow the product to be released into the environment.

**Consumer Exposure Controls:** Do not eat, drink or smoke during use

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

### Information on Basic Physical and Chemical Properties

Physical State	: Liquid
Appearance	: Clear to slightly hazy, colorless
Odor	: Not available
Odor Threshold	: Not available
pH	: 13 - 14
Melting Point	: Not available
Freezing Point	: 11 °C (52 °F)
Boiling Point	: Not available
Flash Point	: Not applicable
Auto-ignition Temperature	: Not available
Decomposition Temperature	: Not available
Flammability (solid, gas)	: Not applicable
Lower Flammable Limit	: Not applicable
Upper Flammable Limit	: Not applicable
Vapor Pressure	: Not available
Relative Vapor Density at 20 °C	: Not available
Specific Gravity	: 1.521 - 1.543
Solubility	: Not available
Partition Coefficient: N-Octanol/Water	: Not available
Viscosity	: Not available
Explosion Data – Sensitivity to Mechanical Impact	: Not expected to present an explosion hazard due to mechanical impact.
Explosion Data – Sensitivity to Static Discharge	: Not expected to present an explosion hazard due to static discharge.

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### SECTION 10: STABILITY AND REACTIVITY

**Reactivity:** May be corrosive to metals. Contact with metals may evolve flammable hydrogen gas.

**Chemical Stability:** Stable under recommended handling and storage conditions (see section 7).

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur.

**Conditions to Avoid:** Direct sunlight. Extremely high or low temperatures. Incompatible materials.

**Incompatible Materials:** Strong acids. Strong oxidizers. Metals.

**Hazardous Decomposition Products:** Hydrogen.

### SECTION 11: TOXICOLOGICAL INFORMATION

#### Information on Toxicological Effects - Product

**Acute Toxicity:** Not classified

**LD50 and LC50 Data:** Not available

**Skin Corrosion/Irritation:** Causes severe skin burns and eye damage. (pH: 13 - 14)

**Serious Eye Damage/Irritation:** Causes serious eye damage. (pH: 13 - 14)

**Respiratory or Skin Sensitization:** Not classified

**Germ Cell Mutagenicity:** Not classified

**Teratogenicity:** Not classified

**Carcinogenicity:** Not classified

**Specific Target Organ Toxicity (Repeated Exposure):** Not classified

**Reproductive Toxicity:** Not classified

**Specific Target Organ Toxicity (Single Exposure):** Not classified

**Aspiration Hazard:** Not classified

**Symptoms/Injuries After Inhalation:** Contact may cause immediate severe irritation progressing quickly to chemical burns.

**Symptoms/Injuries After Skin Contact:** Corrosive. Causes burns.

**Symptoms/Injuries After Eye Contact:** Causes serious eye damage.

**Symptoms/Injuries After Ingestion:** May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract.

**Chronic Symptoms:** None expected under normal conditions of use.

### SECTION 12: ECOLOGICAL INFORMATION

#### Toxicity

**Ecology - General:** This material is hazardous to the aquatic environment. Keep out of sewers and waterways.

**Ecology - Water:** Harmful to aquatic life.

Sodium hydroxide (1310-73-2)	
LC50 Fish 1	45.4 mg/l (Exposure time: 96 h - Species: Oncorhynchus mykiss [static])
EC50 Daphnia 1	40 mg/l (Exposure time: 48 h - Species: Daphnia magna)

**Persistence and Degradability** Not available

**Bioaccumulative Potential** Not available

**Mobility in Soil** Not available

#### Other Adverse Effects

**Other Information:** Avoid release to the environment.

### SECTION 13: DISPOSAL CONSIDERATIONS

**Waste Disposal Recommendations:** Dispose of waste material in accordance with all local, regional, national, and international regulations.

**Ecology – Waste Materials:** Avoid release to the environment.

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### SECTION 14: TRANSPORT INFORMATION

#### 14.1 In Accordance with DOT

**Proper Shipping Name** : SODIUM HYDROXIDE SOLUTION  
**Hazard Class** : 8  
**Identification Number** : UN1824  
**Label Codes** : 8  
**Packing Group** : II  
**ERG Number** : 154



#### 14.2 In Accordance with IMDG

**Proper Shipping Name** : SODIUM HYDROXIDE SOLUTION  
**Hazard Class** : 8  
**Identification Number** : UN1824  
**Packing Group** : II  
**Label Codes** : 8  
**EmS-No. (Fire)** : F-A  
**EmS-No. (Spillage)** : S-B



#### 14.3 In Accordance with IATA

**Proper Shipping Name** : SODIUM HYDROXIDE SOLUTION  
**Packing Group** : II  
**Identification Number** : UN1824  
**Hazard Class** : 8  
**Label Codes** : 8  
**ERG Code (IATA)** : 8L



#### 14.4 In Accordance with TDG

**Proper Shipping Name** : SODIUM HYDROXIDE SOLUTION  
**Packing Group** : II  
**Hazard Class** : 8  
**Identification Number** : UN1824  
**Label Codes** : 8



### SECTION 15: REGULATORY INFORMATION

#### US Federal Regulations

<b>Caustic Soda 50%</b>	
<b>SARA Section 311/312 Hazard Classes</b>	Immediate (acute) health hazard
<b>Sodium hydroxide (1310-73-2)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	
<b>Water (7732-18-5)</b>	
Listed on the United States TSCA (Toxic Substances Control Act) inventory	

#### US State Regulations

<b>Sodium hydroxide (1310-73-2)</b>
U.S. - Massachusetts - Right To Know List
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List
U.S. - Pennsylvania - RTK (Right to Know) List

#### Canadian Regulations

<b>Caustic Soda 50%</b>	
<b>WHMIS Classification</b>	Class E - Corrosive Material

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### Sodium hydroxide (1310-73-2)

Listed on the Canadian DSL (Domestic Substances List)

Listed on the Canadian IDL (Ingredient Disclosure List)

IDL Concentration 1 %

WHMIS Classification Class E - Corrosive Material

### Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List)

WHMIS Classification Uncontrolled product according to WHMIS classification criteria

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all of the information required by CPR.

## SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Revision date : 05/08/15

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

### GHS Full Text Phrases:

Aquatic Acute 3	Hazardous to the aquatic environment - Acute Hazard Category 3
Eye Dam. 1	Serious eye damage/eye irritation Category 1
Met. Corr. 1	Corrosive to metals Category 1
Skin Corr. 1A	Skin corrosion/irritation Category 1A
H290	May be corrosive to metals
H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H402	Harmful to aquatic life

### Party Responsible for the Preparation of This Document

CHEMTRADE LOGISTICS, INC.

For SDS Info: (416) 496-5856

Handle product with due care and avoid unnecessary contact. This information is supplied under U.S. OSHA'S "Right to Know" (29 CFR 1910.1200) and Canada's WHMIS regulations. Although certain hazards are described herein, we cannot guarantee these are the only hazards that exist. The information contained herein is based on data available to us and is believed to be true and accurate but it is not offered as a product specification. No warranty, expressed or implied, regarding the accuracy of this data, the hazards connected with the use of the product, or the results to be obtained from the use thereof, is made and Chemtrade and its affiliates assume no responsibility. Chemtrade is a member of the CIAC (Chemistry Industry Association of Canada) and adheres to the codes and principles of Responsible Care™.



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