

SAFETY DATA SHEET

Sodium Hydroxide (Lye)

Version 11

1. PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifiers: Sodium Hydroxide (Lye)

Synonyms: Caustic Soda Pearls; Caustic Soda Flakes; Caustic Soda Prills

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Chemical processing, soaps and detergents, water treatment, pulp and paper, petroleum industries

1.3 Supplier of Safety Data Sheet

Candora Soap Inc.

85 Midpark Rd. Unit 6.

London, On. N6N-1B2

519-685-3111

www.candorasoap.ca

1.4 Emergency Telephone Number

ChemTel (MIS3548100) (800) 255-3924 Domestic USA, Canada, Puerto Rico, USVI

+ (813) 248-0585 International

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Corrosive to metals (Category 1), Skin corrosion (Category 1B), Serious eye damage (Category 1), Specific Target Organ Toxicity (Category 3).

2.2 GHS Label elements, including precautionary statements

Pictogram:



Signal word: DANGER

Hazard statement(s)

- May be corrosive to metals.
- Causes severe skin burns and serious eye damage.
- May cause respiratory irritation.

Precautionary Statement(s)

Prevention:

- Keep only in original packaging
- Do not breathe dust/fume/gas/mist/vapors/spray.
- Wash skin thoroughly after handling.
- Wear protective gloves/protective clothing/eye protection/face protection.
- Use only outdoors or in a well-ventilated area.

Response:

- IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
- IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
- Wash contaminated clothing before reuse.
- IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CONTROL CENTER or doctor / physician.
- IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CONTROL CENTER or doctor / physician.

Storage:

- Store in corrosive resistant container with a resistant inner liner.
- Store locked up.
- Store in a well ventilated place. Keep container tightly closed.

Disposal:

- Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS – None**3. COMPOSITION / INFORMATION ON INGREDIENTS****3.1 Substances**

Synonyms: Caustic Soda
 Formula: NaOH
 Molecular Weight: 40.00 g/mol
 CAS-No: 1310-73-2

Hazardous Components

Component	Concentration
Sodium Hydroxide	≤ 100%

4. FIRST AID MEASURES**4.1 Description of first aid****Measures General advice**

Consult a physician. Show this SDS to the doctor in attendance. Move out of dangerous area.

If inhaled

If breathed in, move person to 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.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Consider 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.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. FIREFIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

Sodium oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting, if necessary.

5.4 Further information

No data available

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

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

For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

Provide appropriate exhaust ventilation at places where dust is formed

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place.

Storage class (TRGS 510): Non-combustible, corrosive hazardous materials

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Exposure Limits

Components with workplace exposure limits

Component	CAS-No.	Value	Exposure Limits	Basis
Sodium hydroxide	1310-73-2	TWA	2 mg/m ³	USA. Occupational Exposure Limits (OSHA) – Table Z-1 Limits for Air Contaminants
		C	2 mg/m ³	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritation Eye irritation Skin irritation		
		C	2 mg/m ³	USA, NIOSH Recommended Exposure Limits

8.2 Exposure controls**Appropriate engineering controls**

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

Personal protective equipment**Eye/face protection**

Face shield and safety. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU)

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves 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.

Body protection

Complete suit protecting against chemicals. The type of equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate 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).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9. PHYSICAL AND CHEMICAL PROPERTIES**9.1 Information on basic physical and chemical properties**

- | | |
|--------------------------------|---|
| a) Appearance | White pellets |
| b) Odor | Odorless |
| c) Odor Threshold | No data available |
| d) pH | 14 at 50 g/l at 20°C (68°F) |
| e) Melting/Freezing Point | Melting point/range: 318°C (604°F)- lit |
| f) Initial Boiling Point/Range | 1,390° C (2,534° F) |
| g) Flash Point | Not applicable |
| h) Evaporation rate | No data available |
| i) Flammability (solid, gas) | No data available |

j) Upper/lower flammability or explosive limits	No data available
k) Vapor pressure	< 24.00 hPa (<18.00 mmHg) at 20° C (68° F) 4.00 hPa (3.00 mmHg) at 37°C (99° F)
l) Vapor density	1.38 – (Air=1.0)
m) Relative density	2.1300 g/cm ³
n) Water solubility	ca.1,260 g/l at 20° C (68° F)
o) Partition coefficient: n-octanol/water	No data available
p) Auto-ignition temperature	No data available
q) Decomposition temperature	No data available
r) Viscosity	No data available
s) Explosive properties	No data available
t) Oxidizing properties	No data available

9.2 Other safety information

Bulk density	ca. 1,150 kg/m ³
Relative vapor density	1.38 – (Air = 1.0)

10. STABILITY AND REACTIVITY**10.1 Reactivity**

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

No data available

10.5 Incompatible materials

Strong oxidizing agents, strong acids, and organic materials

10.6 Hazardous decomposition products

Other decomposition products - No data available

In the event of fire: see section 5

11. TOXICOLOGICAL INFORMATION**11.1 Information on toxicological effects****Acute toxicity**

No data available

Inhalation: No data available

Dermal: No data available

Skin corrosion/irritation

Skin – Rabbit

Result: Causes severe burns. - 24 h

Serious eye damage/eye irritation

Eyes – Rabbit

Result Corrosive - 24 h

Respiratory or skin sensitization

Will not occur

Germ cell mutagenicity

No data available

Carcinogenicity

IARC: 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.

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.

Reproductive toxicity

No data available

Specific target organ toxicity – single exposure

No data available

Specific target organ toxicity – repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS:WB4900000

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

12. ECOLOGICAL INFORMATION**12.1 Toxicity**

Toxicity to fish	LC50 – Gambusia affinis (Mosquito fish) – 125 mg/l – 96 h LC50 – Oncorhynchus mykiss (rainbow trout) – 45.4 mg/l – 96 h
Toxicity to daphnia and other Aquatic invertebrates	Immobilization EC 50 – Daphnia (water flea) – 40.38 mg/l – 48 h

12.2 Persistence and degradability

The methods for determining the biological degradability are not applicable to inorganic substances.

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Harmful to aquatic life.

13. DISPOSAL CONSIDERATIONS**13.1 Waste treatment methods****Product**

Offer surplus and non-recyclable solutions to a licensed company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and

burn in a chemical incinerator with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)

UN number: 1823 Class: 8 Packing group: II

Proper shipping name: Sodium hydroxide, solid

Reportable Quantity (RQ): 1000 lbs

Poison Inhalation Hazard: No

IMDG

UN number: 1823 Class: 8 Packing Group: II EMS-No: F-A, S-B

Proper shipping name: Sodium hydroxide, solid

IATA

UN number: 1823 Class: 8 Packing Group: II

Proper shipping name: Sodium hydroxide, solid

15. REGULATORY INFORMATION

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

Pennsylvania Right to Know Components

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.

16. OTHER INFORMATION**HMIS Rating**

Health Hazard:	3
Chronic Health Hazard:	
Flammability:	0
Physical Hazard:	0

NFPA Rating

Health Hazard:	3
Fire Hazard:	0
Reactivity Hazard:	0

Further Information:

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Candora Soap Inc. be liable for any claims, losses or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Candora Soap Inc. has been advised of the possibility of such damages.