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**1. PRODUCT AND COMPANY IDENTIFICATION****1.1 Product identifiers****SODIUM HYDROXIDE, SOLID**

**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.

Supplier: Connection Chemical, LP  
126 South State St. Ste. 200  
Newtown, PA 18940 USA

Telephone: +1 215-493-4240  
Fax: +1 215-493-3801

**1.3 Emergency telephone number**

CHEMTREC : 1-800-424-9300

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**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 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 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 safety data sheet to the doctor in attendance. Move out of dangerous area.

**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.

**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.

**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

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**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

Sodium oxides

**5.3 Advice for firefighters**

Wear self-contained breathing apparatus for firefighting if necessary.

**5.4 Further information**

No data available

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**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.

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**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

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**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 <sup>3</sup>	USA. Occupational Exposure Limits (OSHA) - Table Z-1 Limits for Air Contaminants
		C	2 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Upper Respiratory Tract irritation Eye irritation Skin irritation		
		C	2 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits

**Derived No Effect Level (DNEL)**

Application Area	Exposure routes	Health effect	Value
Workers	Inhalation	Long-term local effects	1 mg/m <sup>3</sup>
Consumers	Inhalation	Long-term local effects	1 mg/m <sup>3</sup>

**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 workday.

**Personal protective equipment**
**Eye/face protection**

Face shield and safety glasses 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 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.

**Body Protection**

Complete suit protecting against chemicals. The type of protective 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 particle respirator type N100 (US) or type P3 (EN 143) 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 (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 | Form: pellets<br>Color: white |
| b) Odor       | odorless                      |

c) Odor Threshold	No data available
d) pH	14 at 50 g/l at 20 °C (68 °F)
e) Melting point/freezing point	Melting point/range: 318 °C (604 °F) - lit.
f) Initial boiling point and boiling 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 <sup>3</sup>
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 <sup>3</sup>
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, Organic materials



## SAFETY DATA SHEET

Version 1.1  
Revision Date 05/13/2015

### 10.6 Hazardous decomposition products

Other decomposition products - No data available  
In the event of fire: see section 5

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## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

#### Acute toxicity

No data available

Inhalation: No data available

Dermal: No data available

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

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



## SAFETY DATA SHEET

Version 1.1  
Revision Date 05/13/2015

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                              Immobilization EC50 – *Daphnia* (water flea) – 40.38 mg/l – 48h  
daphnia and other  
aquatic invertebrates

#### 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 disposal 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 equipped 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



## SAFETY DATA SHEET

Version 1.1  
Revision Date 05/13/2015

### 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 Connection Chemical, LP 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 Connection Chemical, LP has been advised of the possibility of such damages.

#### Preparation Information

Connection Chemical, LP

Version: 1.1

Revision Date: 05/13/2015