Safety Data Sheet
Sodium Hydroxide Caustic Beads

SECTION 1: Identification

1.1 Product identifier

Product name: Sodium Hydroxide Caustic Beads
Substance name: NaOH
EC no.: 215-185-5
CAS no.: 1310-73-2
Index no.: 011-002-00-6

1.2 Other means of identification
Lye, Caustic Soda Beads

1.3 Recommended use of the chemical and restrictions on use
Drain Cleaning (dissolves fats and oils into soaps, eats organic material), Soft Pretzel Making, Soap Making, Peeling of fruits & vegetables, Cocoa Processing, Biodiesel Production, Cleaning grease from grease traps, exhaust hoods and fryers, Olive Curing, Paint Removal, Aluminum Etching, Preparing Lutefisk, Relaxer to help straighten hair

1.4 Supplier's details
Name: Duda Energy, LLC
Address: 1112 Brooks St
Decatur, AL 35601
USA
Telephone: 256.340.4866

1.5 Emergency phone number(s)
800.255.3924 MIS: 0006555 Chemtel

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with: (US) OSHA (29 CFR 1910.1200)
- Skin corrosion/irritation (chapter 3.2), Cat. 1A
- Corrosive to metals (chapter 2.16), Cat. 1
- Acute toxicity, dermal (chapter 3.1), Cat. 4
- Eye damage/irritation (chapter 3.3), Cat. 1
- Hazardous to the aquatic environment - acute hazard (chapter 4.1), Cat. 3
- Hazardous to the aquatic environment - long-term hazard (chapter 4.1), Cat. 3

2.2 GHS label elements, including precautionary statements

Pictogram

Signal word | Danger
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**Hazard statement(s)**

H290 | May be corrosive to metals
H312 | Harmful in contact with skin
H314 | Causes severe skin burns and eye damage
H318 | Causes serious eye damage
H402 | Harmful to aquatic life
H412 | Harmful to aquatic life with long lasting effects

**Precautionary statement(s)**

P234 | Keep only in original container.
P260 | Do not breathe dust/fume/gas/mist/vapours/spray.
P264 | Wash … thoroughly after handling.
P273 | Avoid release to the environment.
P280 | Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331 | IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P302+P352 | IF ON SKIN: Wash with plenty of water/…
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 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/doctor/…
P312 | Call a POISON CENTER/doctor/… if you feel unwell.
P321 | Specific treatment (see … on this label).
P362+P364 | Take off contaminated clothing and wash it before reuse.
P363 | Wash contaminated clothing before reuse.
P390 | Absorb spillage to prevent material damage.
P405 | Store locked up.
P406 | Store in a corrosive resistant/… container with a resistant inner liner.
P501 | Dispose of contents/container to …

SECTION 3: Composition/information on ingredients

3.1 Substances

<table>
<thead>
<tr>
<th>Substance name</th>
<th>NaOH</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC no.</td>
<td>215-185-5</td>
</tr>
<tr>
<td>CAS no.</td>
<td>1310-73-2</td>
</tr>
</tbody>
</table>
SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice
Ensure that medical personnel are aware of the materials involved and take precautions to protect themselves.

If inhaled
Move to fresh air. If symptoms develop or persist, see a doctor.

In case of skin contact
Immediately remove all contaminated clothing. Rinse skin with water/shower. Call a doctor or poison control center immediately. Chemical burns must be treated by a professional. Wash contaminated clothing before reuse.

In case of eye contact
Immediately flush eyes with plenty of water for at least 15 minutes. After 15 minutes, remove contact lenses if present and able to do so. Continue rinsing. Call a doctor or poison control center immediately.

If swallowed
Call a doctor or poison control center immediately. Rinse mouth. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content does not enter lungs.

Personal protective equipment for first-aid responders
Use chemical resistant PPE to limit exposure to materials.

4.2 Most important symptoms/effects, acute and delayed
Burning pain and severe corrosive skin damage. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

4.3 Indication of immediate medical attention and special treatment needed, if necessary
Provide general supportive measures and treat symptomatically. Chemical burns: Flush with water immediately. While flushing, remove clothes if not adhered to the affected area. Call an ambulance. Continue flushing during transport to hospital. Keep the injured person warm and under observation. Symptoms may be delayed.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media
Water fog, foam, dry chemical powder, carbon dioxide (CO2)

5.2 Specific hazards arising from the chemical
During fire, hazardous gases may arise.
5.3 Special protective actions for fire-fighters
SCBA and full protective clothing must be worn. Use water spray to cool unopened containers. Use standard firefighting procedures and consider the hazards of other involved materials.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear PPE when cleaning up damaged containers or spilled material. Ensure good ventilation. If significant spoilage (as cannot be contained) occurs, notify local authorities.

6.2 Environmental precautions
Avoid release into the environment. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses, or onto the ground. Inform appropriate personnel of any release into the environment.

6.3 Methods and materials for containment and cleaning up
Sweep up/shovel dry material into suitable container. Dispose of in accordance with all applicable regulations.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Provide adequate ventilation. Do not get in eyes, on skin, or on clothing. When using: Do not eat, drink, or smoke. Wear appropriate PPE. Wash hands thoroughly after handling. Avoid release into the environment. Wash contaminated clothing before reuse. Observe good industrial hygiene practices.

7.2 Conditions for safe storage, including any incompatibilities
Store locked up. Store in a cool, dry place out of direct sunlight. Store in corrosive resistant container with a resistant inner liner. Keep only in the original container. Store away from incompatible materials.

Specific end use(s)
See Section 1

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

   STEL: 2mg/m3 (ACGIH, NIOSH, OSHA)

8.2 Appropriate engineering controls
Good general ventilation 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. Eye wash facilities and emergency showers must be available when handling this product.

8.3 Individual protection measures, such as personal protective equipment (PPE)
   Eye/face protection
Wear safety glasses with sides shields (or goggles). Face shield is recommended. Full-face respirator may be required.

**Skin protection**
Wear appropriate chemical resistant gloves. Wear long-sleeved, chemical resistant clothing.

**Respiratory protection**
Wear suitable respiratory equipment where ventilation is insufficient.

**Environmental exposure controls**
Do not flush into sewage, water-ways, or dispose of onto the ground. Use good, safe handling to prevent spillage and leakage into the environment.

### SECTION 9: Physical and chemical properties

**Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance/form (physical state, color, etc.)</td>
<td>Solid, BEAD White</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>11-14</td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>323°C/317.22°C</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>1388°C</td>
</tr>
<tr>
<td>Flash point</td>
<td>537.2°C</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td></td>
</tr>
<tr>
<td>Upper/lower flammability limits</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>&lt;0.0000001 kPa @ 25°C</td>
</tr>
<tr>
<td></td>
<td>0.13 kPa @ 739°C</td>
</tr>
<tr>
<td>Vapor density</td>
<td>2.13</td>
</tr>
<tr>
<td>Relative density</td>
<td></td>
</tr>
<tr>
<td>Solubility(ies)</td>
<td>Water: 1110 g/l</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td></td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td></td>
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<tr>
<td>Decomposition temperature</td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td></td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not explosive</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not oxidizing</td>
</tr>
</tbody>
</table>

### SECTION 10: Stability and reactivity

#### 10.1 Reactivity
Reacts violently with strong acids. This product may react with oxidizing agents. May be corrosive to metals.

#### 10.2 Chemical stability
Stable under normal conditions.

#### 10.3 Possibility of hazardous reactions
Hazardous polymerization does not occur.

#### 10.4 Conditions to avoid
Contact with incompatible materials.
10.5 Incompatible materials

10.6 Hazardous decomposition products
No hazardous decomposition products are known.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Harmful in contact with skin.

Skin corrosion/irritation
Causes severe skin burns.

Serious eye damage/irritation
Causes serious eye damage.

Respiratory or skin sensitization
Not a respiratory or skin sensitizer.

Germ cell mutagenicity
No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

Carcinogenicity
This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

Reproductive toxicity
This product is not expected to cause reproductive or developmental effects.

STOT-single exposure
Not classified

STOT-repeated exposure
Not classified

Aspiration hazard
Not an aspiration hazard.

SECTION 12: Ecological information

Toxicity
Harmful to aquatic life with long lasting effects.
[Sodium Hydroxide (CAS#1310-73-2)]
Aquatic (Crustacea)
EC50
Water flea (Ceriodaphnia dubia) 34.59-47.13 mg/l, 48hrs
Aquatic (Fish)
LC50
Western mosquitofish (Gambusia affinis) 125 mg/l, 96hrs

Persistence and degradability
No data

Bioaccumulative potential
No data

Mobility in soil
No data

SECTION 13: Disposal considerations

Disposal of the product
Collect and reclaim or dispose of in sealed containers at a licensed waste disposal site. Dispose of material in accordance with all local, regional, national, international regulations.

Disposal of contaminated packaging
Treat contaminated packaging the same as the material. Since emptied containers may still be contaminated with material, follow label warnings. Dispose of in accordance with all applicable regulations.

Waste treatment
Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.

Sewage disposal
Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways, or ditches.

Other disposal recommendations
Hazardous waste code: D002 (Waste Corrosive material [pH <=2 or =>12.5, or corrosive to steel])

SECTION 14: Transport information

DOT (US)
UN Number: UN1823
Class: 8
Packing Group: II
Proper Shipping Name: Sodium Hydroxide, Solid

SECTION 15: Regulatory information

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

Pennsylvania Right To Know Components
Chemical name: Sodium hydroxide
CAS number: 1310-73-2

New Jersey Right To Know Components
Common name: SODIUM HYDROXIDE
CAS number: 1310-73-2

Massachusetts Right To Know Components
Chemical name: Sodium hydroxide
CAS number: 1310-73-2

HMIS Rating
SECTION 16: Other information

16.1 Further information/disclaimer
The information provided in this Safety Data Sheet is correct to the best of Duda Energy LLC's knowledge, information, and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. This Safety Data Sheet only contains information relating to safety and does not replace any product information or product specification. Please note, the content may be changed, corrected, or deleted at any time without notice and may not always necessarily reflect the most current data. Duda Energy LLC will assume no responsibility for any trouble or failure caused by the errors in the information provided, nor any damage associated with the usage of the information.

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