SECTION 1 : Identification of the substance/mixture and of the supplier

Product name: Sodium Hydroxide, 10.0N

Manufacturer/Supplier Trade name: Sodium Hydroxide, 10.0N

Manufacturer/Supplier Article number: S25550

Recommended uses of the product and uses restrictions on use:

Manufacturer Details:
AquaPhoenix Scientific
9 Barnhart Drive, Hanover, PA 17331

Supplier Details:
Fisher Science Education
15 Jet View Drive, Rochester, NY 14624

Emergency telephone number:
Fisher Science Education    Emergency Telephone No.: 800-535-5053

SECTION 2 : Hazards identification

Classification of the substance or mixture:

- **Corrosive**
  - Skin corrosion, category 1A
  - Corrosive to metals, category 1
  - Serious eye damage, category 1

- **Environmentally Damaging**
  - Acute hazards to the aquatic environment, category 3

Corrosive to Metals 1
Skin corr. 1A
Eye irrit. cat 1
Acute aquatic toxicity 3

Signal word: Danger

Hazard statements:
- May be corrosive to metals
- Causes severe skin burns and eye damage
- Causes serious eye damage
- Harmful to aquatic life

Precautionary statements:
- If medical advice is needed, have product container or label at hand
- Keep out of reach of children
- Read label before use
- Keep only in original container
- Do not breathe dust/fume/gas/mist/vapours/spray
- Wash ... thoroughly after handling
- Avoid release to the environment
- Wear protective gloves/protective clothing/eye protection/face protection
Sodium Hydroxide, 10.0N

Wash contaminated clothing before reuse
Absorb spillage to prevent material damage
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Immediately call a POISON CENTER or doctor/physician
Specific treatment (see supplemental first aid instructions on this label)
Store in a corrosive resistant/... container with a resistant inner liner
Store locked up
Dispose of contents/container to ...

Combustible Dust Hazard: :
May form combustible (explosive) dust - air mixtures
P390::
Absorb spillage to prevent material damage.
Combustible Dust Hazard: :
May form combustible dust concentrations in air (during processing).

Other Non-GHS Classification:

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredients</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS 1310-73-2</td>
<td>Sodium Hydroxide</td>
<td>40 %</td>
</tr>
<tr>
<td>CAS 7732-18-5</td>
<td>Deionized Water</td>
<td>60 %</td>
</tr>
</tbody>
</table>

Percentages are by weight

SECTION 4: First aid measures

Description of first aid measures
After inhalation: Move exposed individual to fresh air. Loosen clothing as necessary and position individual in a comfortable position. Seek medical advice if discomfort or irritation persists. Give artificial respiration if necessary. If breathing is difficult give oxygen.

After skin contact: Wash affected area with soap and water. Get medical assistance.

After eye contact: Protect unexposed eye. Rinse or flush exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing. Immediately get medical assistance.

After swallowing: Do not induce vomiting. Have exposed individual drink sips of water. Get medical assistance.

Most important symptoms and effects, both acute and delayed:


Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

For safety reasons unsuitable extinguishing agents: Carbon dioxide.

Special hazards arising from the substance or mixture:

Not considered to be a fire or explosion hazard.

Advice for firefighters:

Protective equipment: Wear protective eyeware, gloves, and clothing. Refer to Section 8.

Additional information (precautions): Avoid contact with skin, eyes, and clothing.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Use under a fume hood.

Environmental precautions:

Prevent from reaching drains, sewer or waterway. Do not release into environment.

Methods and material for containment and cleaning up:

Collect liquid and dilute with water. Neutralize with dilute acid solutions. Decant water to drain with excess water. Absorb with suitable material. Dispose of remaining solid as normal refuse. Always obey local regulations. Wear protective eyeware, gloves, and clothing. Refer to Section 8. Follow proper disposal methods. Refer to Section 13.

Reference to other sections:

SECTION 7 : Handling and storage

Precautions for safe handling:

Avoid contact with eyes, skin, and clothing. Do not inhale gases, fumes, dust, mist, vapor, and aerosols. Wear protective eyeware, gloves, and clothing. Refer to Section 8. Do not mix with acids. Do not eat, drink, smoke, or use personal products when handling chemical substances. Use only in well ventilated areas.

Conditions for safe storage, including any incompatibilities:

Keep container tightly closed in a cool, dry, and well-ventilated area. Store as a corrosive. Protect from freezing and physical damage.
SECTION 8 : Exposure controls/personal protection

Control Parameters:
1310-73-2, Sodium Hydroxide, OSHA 2 mg/m3
1310-73-2, Sodium Hydroxide, ACGIH NIOSH 10 mg/m3

Appropriate Engineering controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above. Use under a chemical fume hood.

Respiratory protection: Use under a fume hood.

Protection of skin: Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Wear protective clothing.

Eye protection: Safety glasses with side shields or goggles.

General hygienic measures: Wash hands before breaks and immediately after handling the product. Avoid contact with the eyes and skin. Before wearing again wash contaminated clothing. Perform routine housekeeping. Wash hands and exposed skin with soap and plenty of water.

SECTION 9 : Physical and chemical properties

<table>
<thead>
<tr>
<th>Appearance (physical state,color):</th>
<th>Clear colorless liquid</th>
<th>Explosion limit lower:</th>
<th>Non Explosive</th>
</tr>
</thead>
<tbody>
<tr>
<td>Explosion limit upper:</td>
<td></td>
<td></td>
<td>Non Explosive</td>
</tr>
<tr>
<td>Odor:</td>
<td>Odorless</td>
<td>Vapor pressure:</td>
<td>14mmHg @ 20°C</td>
</tr>
<tr>
<td>Odor threshold:</td>
<td>Not Applicable</td>
<td>Vapor density:</td>
<td>&gt;1</td>
</tr>
<tr>
<td>pH-value:</td>
<td>Alkaline</td>
<td>Relative density:</td>
<td>1.32</td>
</tr>
<tr>
<td>Melting/Freezing point:</td>
<td>Approx 0°C</td>
<td>Solubilities:</td>
<td>Soluble in water</td>
</tr>
<tr>
<td>Boiling point/Boiling range:</td>
<td>Approx 100°C</td>
<td>Partition coefficient (n-octanol/water):</td>
<td>Not Available</td>
</tr>
<tr>
<td>Flash point (closed cup):</td>
<td>Not Applicable</td>
<td>Auto/Self-ignition temperature:</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Evaporation rate:</td>
<td>Not Available</td>
<td>Decomposition temperature:</td>
<td>Not Available</td>
</tr>
<tr>
<td>Density:</td>
<td>Not Available</td>
<td></td>
<td>b. Dynamic: Not Available</td>
</tr>
</tbody>
</table>

SECTION 10 : Stability and reactivity

Reactivity: None under normal processing.
Chemical stability: Stable under normal conditions.
Possible hazardous reactions:
Conditions to avoid: Incompatible materials. Excessive heat.
Incompatible materials: Acids. Organic halogen compounds. Metals such as aluminum, tin, and zinc.
Hazardous decomposition products: Sodium oxides. Decomposition by reaction with certain metals releases flammable and explosive hydrogen gas.

SECTION 11 : Toxicological information

<table>
<thead>
<tr>
<th>Acute Toxicity:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral:</td>
</tr>
<tr>
<td>LD50 orl-rat:  &gt;90mL/kg</td>
</tr>
</tbody>
</table>

| Chronic Toxicity: No additional information. |
| Corrosion Irritation: No additional information. |

| Sensitization: No additional information. |
| Single Target Organ (STOT): No additional information. |
| Numerical Measures: No additional information. |
| Carcinogenicity: Not listed as a carcinogen: 1310-73-2 |
| Mutagenicity: No additional information. |
| Reproductive Toxicity: No additional information. |

SECTION 12 : Ecological information

Ecotoxicity
- **Toxicity to aquatic life:** Sodium Hydroxide has high acute and chronic toxicity to aquatic life influenced by hardness and alkalinity of the receiving water.

Persistence and degradability:
Bioaccumulative potential:
Mobility in soil:
Other adverse effects:

SECTION 13 : Disposal considerations

Waste disposal recommendations:
- Do not allow product to reach sewage system or open water. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11).
- Neutralize with dilute acid solutions. Comply with all local, state, and federal regulations.

SECTION 14 : Transport information

<table>
<thead>
<tr>
<th>UN-Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1824</td>
</tr>
</tbody>
</table>

| UN proper shipping name |
| Sodium Hydroxide Solution |

| Transport hazard class(es) |
Sodium Hydroxide, 10.0N

Class:
- 8 Corrosive substances

Packing group: II

Environmental hazard:
- Transport in bulk:

Special precautions for user:

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):
- None of the ingredients is listed

SARA Section 313 (Specific toxic chemical listings):
- None of the ingredients is listed

RCRA (hazardous waste code):
- None of the ingredients is listed

TSCA (Toxic Substances Control Act):
- All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):
- 1310-73-2 Sodium Hydroxide 1000lbs

Proposition 65 (California):

Chemicals known to cause cancer:
- None of the ingredients is listed

Chemicals known to cause reproductive toxicity for females:
- None of the ingredients is listed

Chemicals known to cause reproductive toxicity for males:
- None of the ingredients is listed

Chemicals known to cause developmental toxicity:
- None of the ingredients is listed

Canada

Canadian Domestic Substances List (DSL):
- All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):
- None of the ingredients is listed

Canadian NPRI Ingredient Disclosure list (limit 1%):
- 1310-73-2 Sodium Hydroxide

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note: The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct
employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

GHS Full Text Phrases:

Abbreviations and acronyms:
IMDG: International Maritime Code for Dangerous Goods
PNEC: Predicted No-Effect Concentration (REACH)
CFR: Code of Federal Regulations (USA)
SARA: Superfund Amendments and Reauthorization Act (USA)
RCRA: Resource Conservation and Recovery Act (USA)
TSCA: Toxic Substances Control Act (USA)
NPRI: National Pollutant Release Inventory (Canada)
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)

Effective date: 01.06.2015
Last updated: 03.27.2015