1. Identification

1.1. Product identifier
Product Identity  pH Control®
Alternate Names  pH Control®

1.2. Relevant identified uses of the substance or mixture and uses advised against
Intended use  See Technical Data Sheet.
Application Method  See Technical Data Sheet.

1.3. Details of the supplier of the safety data sheet
Company Name  Pharmacal Research Labs., Inc.
24 hour Emergency Telephone No.:  CHEMTREC (USA) (800) 424-9300
IN CANADA CALL CANUTEC (613) 996-6666

2. Hazard(s) identification

2.1. Classification of the substance or mixture
Skin Corr. 1A;H314  Causes severe skin burns and eye damage.
Eye Dam. 1;H318  Causes serious eye damage.
Aquatic Acute 3;H402  Harmful to aquatic life.

2.2. Label elements
Using the Toxicity Data listed in section 11 and 12 the product is labeled as follows.

Danger
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H402 Harmful to aquatic life.

[Prevention]:
P260 Do not breathe mist / vapors / spray.
P264 Wash thoroughly after handling.
P273 Avoid release to the environment.
P280 Wear protective gloves / eye protection / face protection.

[Response]:
P301+330+331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+361+353 IF ON SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / shower.
P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P310 Immediately call a POISON CENTER or doctor / physician.
P363 Wash contaminated clothing before reuse.
P391 Collect spillage.

[Storage]:
P406 Store in corrosive resistant container with a resistant inner liner.

[Disposal]:
P501 Dispose of contents / container in accordance with local / national regulations.

### 3. Composition/information on ingredients

This product contains the following substances that present a hazard within the meaning of the relevant State and Federal Hazardous Substances regulations.

<table>
<thead>
<tr>
<th>Ingredient/Chemical Designations</th>
<th>Weight %</th>
<th>GHS Classification</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide</td>
<td>20</td>
<td>Skin Corr. 1A; H314 Acute Tox(Dermal). 4; H312 Eye Dam. 1, H318 Aquatic Acute 3, H402</td>
<td>[1][2]</td>
</tr>
</tbody>
</table>

[1] Substance classified with a health or environmental hazard.

*The full texts of the phrases are shown in Section 16.
4. First aid measures

4.1. Description of first aid measures

General  In all cases of doubt, or when symptoms persist, seek medical attention. Never give anything by mouth to an unconscious person.

Inhalation  Corrosive and irritating to upper respiratory tract and mucous membranes. Remove affected person to fresh air; wash mouth and nasal passages with water repeatedly; if breathing difficulties persist, seek medical attention

Eyes  Hold eye open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after the first five minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin  Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 - 20 minutes. Call a poison control center or doctor for treatment advice.

Ingestion  DO NOT induce vomiting; Rinse mouth with water; Seek medical attention immediately.

4.2. Most important symptoms and effects, both acute and delayed

Overview  EFFECTS OF OVEREXPOSURE:
SKIN: Will cause severe irritation, redness, and, if untreated, can result in deep chemical burns.
EYES: Corrosive to eyes resulting in irritation, reddening, chemical burns, and, if untreated, possibly permanent blindness.
INGESTION: Will causes burns of the mucous membranes in the mouth, throat, esophagus, stomach, and can result in possible death.
INHALATION: Airborne concentrations of dusts or mists will cause damage to the upper respiratory tract and lungs, which may result in chemical pneumonia. See section 2 for further details.

Eyes  Causes serious eye damage.

Skin  Causes severe skin burns and eye damage.

5. Fire-fighting measures

5.1. Extinguishing media
Use media appropriate for surrounding area.

5.2. Special hazards arising from the substance or mixture
Non-combustible material.
Do not breathe mist / vapors / spray.

5.3. Advice for fire-fighters
Not combustible, however following evaporation of aqueous component residual material can decompose if involved in a fire, emitting toxic fumes. Contact with metals may liberate hydrogen gas which is extremely flammable. Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to products of
6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Put on appropriate personal protective equipment (see section 8).

6.2. Environmental precautions
Do not allow spills to enter drains or waterways.
Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

6.3. Methods and material for containment and cleaning up
Protective clothing and equipment must be worn. Contain spill or leakage in suitable container or holding area. Do not allow drainage to sewers, streams or storm drains. Recover with vacuum equipment and flush with water. Spilled material is slippery.
“EMPTY” CONTAINER WARNINGS: Do not reuse empty container. Triple rinse with water - dispose of in conformance with federal, state, and local regulations.

7. Handling and storage

7.1. Precautions for safe handling
Avoid storing next to strong acids. Avoid inhalation of vapor or mist.
See section 2 for further details. - [Prevention]:

7.2. Conditions for safe storage, including any incompatibilities
Handle containers carefully to prevent damage and spillage.
Incompatible materials: May react with water, acids, metals and reducing sugars (fructose). Avoid contact with "soft" metals such as magnesium, zinc and aluminum.
Keep in well ventilated area - store above 10°C (50°F). Use goggles or face shield, rubber gloves, and boots where contact is expected.
See section 2 for further details. - [Storage]:

7.3. Specific end use(s)
Keep out of reach of children.
For professional use only.
Do not mix with any other chemicals unless compatibility has been established by the manufacturer.
8. Exposure controls and personal protection

8.1. Control parameters

Exposure

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Ingredient</th>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0001310-73-2</td>
<td>Sodium hydroxide</td>
<td>OSHA</td>
<td>TWA 2 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ACGIH</td>
<td>Ceiling: 2 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NIOSH</td>
<td>C 2 mg/m3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Supplier</td>
<td>No Established Limit</td>
</tr>
</tbody>
</table>

Carcinogen Data

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Ingredient</th>
<th>Source</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0001310-73-2</td>
<td>Sodium hydroxide</td>
<td>OSHA</td>
<td>Select Carcinogen: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>NTP</td>
<td>Known: No; Suspected: No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>IARC</td>
<td>Group 1: No; Group 2a: No; Group 2b: No; Group 3: No; Group 4: No;</td>
</tr>
</tbody>
</table>

8.2. Exposure controls

Respiratory For mist use NIOSH approved respirator.

Eyes Chemical Splash goggles or face shield

Skin A rubber apron and boots are recommended to minimize contact. Protective gloves: Nitrile Rubber

Engineering Controls Provide adequate ventilation. Where reasonably practicable this should be achieved by the use of local exhaust ventilation and good general extraction. If these are not sufficient to maintain concentrations of particulates and any vapor below occupational exposure limits suitable respiratory protection must be worn.

Other Work Practices Use good personal hygiene practices. Wash hands before eating, drinking, smoking or using toilet. Promptly remove soiled clothing and wash thoroughly before reuse.

See section 2 for further details. - [Prevention]:
### Melting point / freezing point
Not Measured

### Initial boiling point and boiling range
Not Measured

### Flash Point
Not Measured

### Evaporation rate (Ether = 1)
Not Measured

### Flammability (solid, gas)
Not Applicable

### Upper/lower flammability or explosive limits
- **Lower Explosive Limit:** Not Measured
- **Upper Explosive Limit:** Not Measured

### Vapor pressure (Pa)
Not Measured

### Vapor Density
Not Measured

### Specific Gravity
1.21

### Solubility in Water
Complete @ 1 ATM and 25°C

### Partition coefficient n-octanol/water (Log Kow)
Not Measured

### Auto-ignition temperature
Not Measured

### Decomposition temperature
Not Measured

### Viscosity (cSt)
Not Measured

## 9.2. Other information
Physical properties are approximate or typical values and should not be used for precise design purposes

## 10. Stability and reactivity

### 10.1. Reactivity
Do not allow contact with acids

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

### 10.3. Possibility of hazardous reactions
No data available.

### 10.4. Conditions to avoid
Avoid contact with strong acids

### 10.5. Incompatible materials
May react with water, acids, and metals. Avoid contact with "soft" metals such as magnesium, zinc and aluminum.

### 10.6. Hazardous decomposition products
Other decomposition products- no data available
In the event of fire: see section 5
11. Toxicological information

Acute toxicity

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Oral LD50, mg/kg</th>
<th>Skin LD50, mg/kg</th>
<th>Inhalation Vapor LD50, mg/L/4hr</th>
<th>Inhalation Dust/Mist LD50, mg/L/4hr</th>
<th>Inhalation Gas LD50, ppm</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide - (1310-73-2)</td>
<td>6,600.00, Mouse - Category: NA</td>
<td>1,350.00, Rabbit - Category: 4</td>
<td>600.00, Mouse - Category: NA</td>
<td>No data available</td>
<td>No data available</td>
</tr>
</tbody>
</table>

Note: When no route specific LD50 data is available for an acute toxin, the converted acute toxicity point estimate was used in the calculation of the product's ATE (Acute Toxicity Estimate).

Classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Category</th>
<th>Hazard Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity (oral)</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Acute toxicity (dermal)</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Acute toxicity (inhalation)</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>1A</td>
<td>Causes severe skin burns and eye damage.</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>1</td>
<td>Causes serious eye damage.</td>
</tr>
<tr>
<td>Respiratory sensitization</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Skin sensitization</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>STOT-single exposure</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>STOT-repeated exposure</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>---</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

12. Ecological information

12.1. Toxicity
Harmful to aquatic life.
Harmful to aquatic life with long lasting effects.
No additional information provided for this product. See Section 3 for chemical specific data.
Aquatic Ecotoxicity

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>96 hr LC50 fish, mg/l</th>
<th>48 hr EC50 crustacea, mg/l</th>
<th>ErC50 algae, mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium hydroxide - (1310-73-2)</td>
<td>196.00, Poecilia reticulata</td>
<td>40.38, Ceriodaphnia dubia</td>
<td>Not Available</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability
There is no data available on the preparation itself.

12.3. Bioaccumulative potential
Not Measured

12.4. Mobility in soil
No data available.

12.5. Results of PBT and vPvB assessment
This product contains no PBT/vPvB chemicals.

12.6. Other adverse effects
No data available.

13. Disposal considerations

13.1. Waste treatment methods
Observe all federal, state and local regulations when disposing of this substance.

14. Transport information

14.1. UN number
UN1824

14.2. UN proper shipping name
Sodium Hydroxide Solution

14.3. Transport hazard class(es)
DOT Hazard Class: 8
DOT Label: 8

14.4. Packing group
II

14.5. Environmental hazards
IMDG: Marine Pollutant: No

14.6. Special precautions for user: No further information
15. Regulatory information

Regulatory Overview
The regulatory data in Section 15 is not intended to be all-inclusive, only selected regulations are represented.

Toxic Substance Control Act (TSCA)
All components of this material are either listed or exempt from listing on the TSCA Inventory.

WHMIS Classification
D2B E

US EPA Tier II Hazards
Fire: No
Sudden Release of Pressure: No
Reactive: No
Immediate (Acute): Yes
Delayed (Chronic): No

EPCRA 311/312 Chemicals and RQs (lbs):
Sodium hydroxide (1,000.00)

EPCRA 302 Extremely Hazardous:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

EPCRA 313 Toxic Chemicals:
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Carcinogens (≥0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Developmental Toxins (≥0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Female Repro Toxins (≥0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

Proposition 65 - Male Repro Toxins (≥0.0%):
To the best of our knowledge, there are no chemicals at levels which require reporting under this statute.

N.J. RTK Substances (≥1%):
Sodium hydroxide

Penn RTK Substances (≥1%):
Sodium hydroxide

16. Other information

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein. We accept no responsibility and disclaim all liability for any harmful effects which may be caused by exposure to our products. Customers/users of this product must comply with all applicable health and safety laws, regulations, and orders.
The full text of the phrases appearing in section 3 is:

H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H402 Harmful to aquatic life.

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

The information and recommendations contained herein are, to the best of Pharmacal's knowledge and belief, accurate and reliable as of the date issued. Pharmacal does not warrant or guarantee their accuracy or reliability, and Pharmacal shall not be liable for any loss or damage arising out of there use thereof.

The information and recommendations are offered for the user’s consideration and examination, and it is the user’s responsibility to satisfy itself that they are suitable and complete for its particular use.

The hazardous materials identification system (HMIS) and national fire protection association ratings have been included by Pharmacal research laboratories INC. In order to provide additional health and hazard information. The ratings recommended are based upon criteria supplied by the developers of these rating systems, together with Pharmacal's interpretation of the available data.

End of Document