SECTION 1: Identification

1.1. Identification
Product form: Mixtures
Product name: Sodium Hydroxide, 6.0N (6.0M)
Product code: LC24460

1.2. Relevant identified uses of the substance or mixture and uses advised against
Use of the substance/mixture: For laboratory and manufacturing use only.

1.3. Details of the supplier of the safety data sheet
LabChem Inc
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court
Zelienople, PA 16063 - USA
T 412-826-5230 - F 724-473-0647
info@labchem.com - www.labchem.com

1.4. Emergency telephone number
Emergency number: CHEMTREC: 1-800-424-9300 or 011-703-527-3887

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture
GHS-US classification
- Skin corrosion/irritation, Category 1B H314
- Serious eye damage/eye irritation, Category 1 H318
Full text of H statements: see section 16

2.2. Label elements

GHS-US labelling
Hazard pictograms (GHS-US):

Signal word (GHS-US): Danger
Hazard statements (GHS-US): H314 - Causes severe skin burns and eye damage
Precautionary statements (GHS-US):
- P260 - Do not breathe mist, spray, vapours
- P264 - Wash exposed skin thoroughly after handling
- P280 - Wear eye protection, face protection, protective clothing, protective gloves
- P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
- P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
- 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 or doctor/physician
- P363 - Wash contaminated clothing before reuse
- P405 - Store locked up
- P501 - Dispose of contents/container to comply with local, state and federal regulations If inhaled: Remove person to fresh air and keep comfortable for breathing

2.3. Other hazards
Other hazards not contributing to the classification: None.

2.4. Unknown acute toxicity (GHS US)
Not applicable

SECTION 3: Composition/information on ingredients

3.1. Substances
Not applicable
Sodium Hydroxide, 6.0N (6.0M)
Safety Data Sheet

3.2. Mixtures

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>(CAS No) 7732-18-5</td>
<td>80.27</td>
<td></td>
</tr>
<tr>
<td>Sodium Hydroxide</td>
<td>(CAS No) 1310-73-2</td>
<td>19.73</td>
<td>Acute Tox. 4 (Dermal), H312 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402</td>
</tr>
</tbody>
</table>

Full text of hazard classes and H-statements : see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

First-aid measures after inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.

First-aid measures after skin contact : Immediately call a POISON CENTER or doctor/physician. Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

First-aid measures after eye contact : 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.

First-aid measures after ingestion : Do NOT induce vomiting. Immediately call a POISON CENTER or doctor/physician. Rinse mouth.

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

Symptoms/injuries : Causes severe skin burns and eye damage.

Symptoms/injuries after inhalation : Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes.

Symptoms/injuries after skin contact : Caustic burns/corrosion of the skin.

Symptoms/injuries after eye contact : Causes serious eye damage.


Symptoms/injuries upon intravenous administration : Not available.

Chronic symptoms : Not available.

4.3. Indication of any immediate medical attention and special treatment needed

Obtain medical assistance.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media


Unsuitable extinguishing media : Not available. Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Not flammable.

Explosion hazard : Not available.


5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. In case of fire, stop leak if safe to do so. When cooling/extinguishing: no water in the substance. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

Other information : Not available.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General measures : Eliminate ignition sources. Ensure adequate ventilation. Wear self-contained breathing apparatus when entering area unless atmosphere is proved to be safe.

6.1.1. For non-emergency personnel

Protective equipment : Wear chemically protective gloves, lab coat or apron to prevent prolonged or repeated skin contact.

02/09/2017
EN (English)

6.1.2. For emergency responders
Protective equipment: Equip cleanup crew with proper protection.
Emergency procedures: Stop leak if safe to do so. Ventilate area.

6.2. Environmental precautions
Avoid release to the environment. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up
For containment: Take up liquid spill into inert absorbent material.
Methods for cleaning up: Carefully collect the spill/leftovers. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections
See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Additional hazards when processed: May be corrosive to metals.
Precautions for safe handling: Do not get in eyes, on skin, or on clothing. Remove contaminated clothing immediately. Use corrosionproof equipment. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Do not breathe mist, spray, vapours.
Hygiene measures: Wash exposed skin thoroughly after handling. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities
Technical measures: Comply with applicable regulations.
Storage conditions: Keep container closed when not in use. Store in original container. Keep only in the original container in a cool, well ventilated place away from incompatible materials.
Incompatible products: Strong acids. metals.
Incompatible materials: Sources of ignition. Direct sunlight.
Storage temperature: 5 - 30 °C
Prohibitions on mixed storage: KEEP SUBSTANCE AWAY FROM: (strong) acids. metals. metal powders.
Storage area: Keep locked up. Store in a well-ventilated place. Keep only in the original container.
Special rules on packaging: SPECIAL REQUIREMENTS: corrosion-proof.
Packaging materials: Do not store in corrovable metal.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
Water (7732-18-5): Not applicable

Sodium Hydroxide (1310-73-2)

<table>
<thead>
<tr>
<th>Agency</th>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>Ceiling (mg/m³)</td>
<td>2 mg/m³ (Sodium hydroxide; USA; Momentary value; TLV - Adopted Value)</td>
</tr>
<tr>
<td>OSHA</td>
<td>PEL (TWA) (mg/m³)</td>
<td>2 mg/m³</td>
</tr>
<tr>
<td>IDLH</td>
<td>US IDLH (mg/m³)</td>
<td>10 mg/m³</td>
</tr>
<tr>
<td>NIOSH</td>
<td>REL (ceiling) (mg/m³)</td>
<td>2 mg/m³</td>
</tr>
</tbody>
</table>

8.2. Exposure controls
Appropriate engineering controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.
Sodium Hydroxide, 6.0N (6.0M)
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according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

**Personal protective equipment**

**Hand protection**
- Wear chemically resistant protective gloves. Wear protective gloves.

**Eye protection**
- Chemical goggles or face shield.

**Skin and body protection**
- Wear suitable protective clothing.

**Respiratory protection**
- In case of inadequate ventilation wear respiratory protection. Wear appropriate mask.

**Thermal hazard protection**
- None necessary.

**Other information**
- Do not eat, drink or smoke during use.

### SECTION 9: Physical and chemical properties

**9.1. Information on basic physical and chemical properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
</tr>
<tr>
<td>Appearance</td>
<td>Clear, colorless liquid.</td>
</tr>
<tr>
<td>Colour</td>
<td>clear Colourless</td>
</tr>
<tr>
<td>Odour</td>
<td>odourless</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>≥ 14</td>
</tr>
<tr>
<td>Melting point</td>
<td>No data available</td>
</tr>
<tr>
<td>Freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative evaporation rate (butylacetate=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Non flammable.</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative vapour density at 20 °C</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>1.2 g/ml</td>
</tr>
<tr>
<td>Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>3.7 cSt</td>
</tr>
<tr>
<td>Viscosity, dynamic</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive limits</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidising properties</td>
<td>No data available</td>
</tr>
</tbody>
</table>

**9.2. Other information**

No additional information available

### SECTION 10: Stability and reactivity

**10.1. Reactivity**

Reacts with (some) metals: release of highly flammable gases/vapours (hydrogen). Thermal decomposition generates: Corrosive vapours.

**10.2. Chemical stability**

Stable under normal conditions.

**10.3. Possibility of hazardous reactions**

Reacts violently with acids.

**10.4. Conditions to avoid**

Incompatible materials. Direct sunlight. Extremely high or low temperatures.
10.5. Incompatible materials
metals. Strong acids.

10.6. Hazardous decomposition products
Sodium oxide. Thermal decomposition generates: Corrosive vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Likely routes of exposure: Skin and eyes contact
Acute toxicity: Not classified

**Sodium Hydroxide, 6.0N (6.0M)**

<table>
<thead>
<tr>
<th>LD50 dermal rabbit</th>
<th>6842 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE US (dermal)</td>
<td>6842.000 mg/kg bodyweight</td>
</tr>
</tbody>
</table>

**Water (7732-18-5)**

<table>
<thead>
<tr>
<th>LD50 oral rat</th>
<th>≥ 90000 mg/kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATE US (oral)</td>
<td>90000.000 mg/kg bodyweight</td>
</tr>
</tbody>
</table>

**Sodium Hydroxide (1310-73-2)**

| ATE US (dermal) | 1350.000 mg/kg bodyweight |

Skin corrosion/irritation: Causes severe skin burns and eye damage.

pH: ≥ 14

Serious eye damage/irritation: Causes serious eye damage.

pH: ≥ 14

Respiratory or skin sensitisation: Not classified

Germ cell mutagenicity: Based on available data, the classification criteria are not met

Carcinogenicity: Not classified

Reproductive toxicity: Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure): Not classified

Specific target organ toxicity (repeated exposure): Not classified

Aspiration hazard: Not classified

Potential adverse human health effects and symptoms: Based on available data, the classification criteria are not met.

Symptoms/injuries after inhalation: Coughing. Irritation of the respiratory tract. Irritation of the nasal mucous membranes.

Symptoms/injuries after skin contact: Caustic burns/corrosion of the skin.

Symptoms/injuries after eye contact: Causes serious eye damage.


Symptoms/injuries upon intravenous administration: Not available.

Chronic symptoms: Not available.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.

Ecology - water: Toxic to aquatic life.

**Sodium Hydroxide, 6.0N (6.0M)**

<table>
<thead>
<tr>
<th>LC50 fish 1</th>
<th>229 mg/l</th>
</tr>
</thead>
<tbody>
<tr>
<td>EC50 Daphnia 1</td>
<td>205 mg/l</td>
</tr>
</tbody>
</table>
Sodium Hydroxide, 6.0N (6.0M)

Safety Data Sheet

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<table>
<thead>
<tr>
<th>Sodium Hydroxide (1310-73-2)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>LC50 fish 1</td>
<td>45.4 mg/l (LC50; Other; 96 h; Salmo gairdneri; Static system; Fresh water; Experimental value)</td>
</tr>
</tbody>
</table>

12.2. Persistence and degradability

**Sodium Hydroxide, 6.0N (6.0M)**

Persistence and degradability: Not established.

**Water (7732-18-5)**

Persistence and degradability: Not established.

<table>
<thead>
<tr>
<th>Sodium Hydroxide (1310-73-2)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Persistence and degradability</td>
<td>Biodegradability: not applicable. No (test)data on mobility of the substance available.</td>
</tr>
<tr>
<td>Biochemical oxygen demand (BOD)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Chemical oxygen demand (COD)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>ThOD</td>
<td>Not applicable</td>
</tr>
</tbody>
</table>

12.3. Bioaccumulative potential

**Sodium Hydroxide, 6.0N (6.0M)**

Bioaccumulative potential: Not established.

**Water (7732-18-5)**

Bioaccumulative potential: Not established.

<table>
<thead>
<tr>
<th>Sodium Hydroxide (1310-73-2)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Bioaccumulative potential</td>
<td>No bioaccumulation data available.</td>
</tr>
</tbody>
</table>

12.4. Mobility in soil

No additional information available.

12.5. Other adverse effects

Other adverse effects: May cause pH changes in aqueous ecological systems.

Effect on the global warming: No known effects from this product.

GWPmix comment: No known effects from this product.

Other information: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations: Dispose of contents/container to comply with local, state and federal regulations. Dispose in a safe manner in accordance with local/national regulations.

Ecology - waste materials: Avoid release to the environment.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Transport document description: UN1824 Sodium hydroxide solution, 8, II

UN-No.(DOT): UN1824

Proper Shipping Name (DOT): Sodium hydroxide solution

Transport hazard class(es) (DOT): 8 - Class 8 - Corrosive material 49 CFR 173.136

Packing group (DOT): II - Medium Danger

Hazard labels (DOT): 8 - Corrosive

DOT Packaging Non Bulk (49 CFR 173.xxx): 202
Sodium Hydroxide, 6.0N (6.0M)


DOT Special Provisions (49 CFR 172.102):

IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.

N34 - Aluminum construction materials are not authorized for any part of a packaging which is normally in contact with the hazardous material.

DOT Packaging Exceptions (49 CFR 173.xxx): 154

DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27): 1 L

DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75): 30 L

DOT Vessel Stowage Location: A - The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel.

DOT Vessel Stowage Other: 52 - Stow “separated from” acids

Other information: No supplementary information available.

SECTION 15: Regulatory information

15.1. US Federal regulations

<table>
<thead>
<tr>
<th>Sodium Hydroxide, 6.0N (6.0M)</th>
<th>SARA Section 311/312 Hazard Classes</th>
<th>Immediate (acute) health hazard</th>
</tr>
</thead>
</table>

All components of this product are listed, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory.

This product or mixture does not contain a toxic chemical or chemicals in excess of the applicable de minimis concentration as specified in 40 CFR §372.38(a) subject to the reporting requirements of section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR Part 372.

<table>
<thead>
<tr>
<th>Sodium Hydroxide (1310-73-2)</th>
<th>RQ (Reportable quantity, section 304 of EPA's List of Lists)</th>
<th>1000 lb</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Sodium Hydroxide (1310-73-2)</th>
<th>SARA Section 311/312 Hazard Classes</th>
<th>Immediate (acute) health hazard</th>
</tr>
</thead>
</table>

15.2. International regulations

CANADA

<table>
<thead>
<tr>
<th>Sodium Hydroxide, 6.0N (6.0M)</th>
<th>WHMIS Classification</th>
<th>Class E - Corrosive Material</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Water (7732-18-5)</th>
<th>WHMIS Classification</th>
<th>Uncontrolled product according to WHMIS classification criteria</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Sodium Hydroxide (1310-73-2)</th>
<th>WHMIS Classification</th>
<th>Class E - Corrosive Material</th>
</tr>
</thead>
</table>

EU-Regulations

No additional information available

National regulations

No additional information available
Sodium Hydroxide, 6.0N (6.0M)
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**15.3. US State regulations**
California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

**SECTION 16: Other information**
Revision date : 05/27/2015
Other information : None.
Full text of H-statements: see section 16:

<table>
<thead>
<tr>
<th>H</th>
<th>Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>H312</td>
<td>Harmful in contact with skin</td>
</tr>
<tr>
<td>H314</td>
<td>Causes severe skin burns and eye damage</td>
</tr>
<tr>
<td>H318</td>
<td>Causes serious eye damage</td>
</tr>
<tr>
<td>H402</td>
<td>Harmful to aquatic life</td>
</tr>
</tbody>
</table>

NFPA health hazard : 3 - Materials that, under emergency conditions, can cause serious or permanent injury.

NFPA fire hazard : 0 - Materials that will not burn under typical dire conditions, including intrinsically noncombustible materials such as concrete, stone, and sand.

NFPA reactivity : 1 - Materials that in themselves are normally stable but can become unstable at elevated temperatures and pressures.

HMIS III Rating
Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given
Flammability : 0 Minimal Hazard - Materials that will not burn
Physical : 1 Slight Hazard - Materials that are normally stable but can become unstable (self-react) at high temperatures and pressures. Materials may react non-violently with water or undergo hazardous polymerization in the absence of inhibitors.

Personal protection : D
D - Face shield and eye protection, Gloves, Synthetic apron

SDS US LabChem

Information in this SDS is from available published sources and is believed to be accurate. No warranty, express or implied, is made and LabChem Inc assumes no liability resulting from the use of this SDS. The user must determine suitability of this information for his application.