SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier
Product form : Mixture
Product name : Potassium Hydroxide, 10.0N (10.0M)
Product code : LC19370

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: Hazards identification

2.1. Classification of the substance or mixture
GHS-US classification
Acute Tox. 4 (Oral) H302
Skin Corr. 1B H314
Eye Dam. 1 H318
Aquatic Acute 3 H402

2.2. Label elements
GHS-US labelling
Hazard pictograms (GHS-US) :

Signal word (GHS-US) : Danger
Hazard statements (GHS-US) : H302 - Harmful if swallowed
H314 - Causes severe skin burns and eye damage
H402 - Harmful to aquatic life
Precautionary statements (GHS-US) :
P260 - Do not breathe mist, vapours, spray
P264 - Wash exposed skin thoroughly after handling
P270 - Do not eat, drink or smoke when using this product
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
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated
clothing. Rinse skin with water/shower
P304+P340 - IF INHALED: remove victim to fresh air and keep at rest in a position 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 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

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

Potassium Hydroxide, 10.0N (10.0M)
Safety Data Sheet
according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations
Date of issue: 12/20/2013  Version: 1.0
Potassium Hydroxide, 10.0N (10.0M)

Safety Data Sheet

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2.4. Unknown acute toxicity (GHS-US)
No data available

SECTION 3: Composition/information on ingredients

3.1. Substance
Not applicable
Full text of H-phrases: see section 16

3.2. Mixture

<table>
<thead>
<tr>
<th>Name</th>
<th>Product identifier</th>
<th>%</th>
<th>GHS-US classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water (CAS No) 7732-18-5</td>
<td>59.69</td>
<td></td>
<td>Not classified</td>
</tr>
<tr>
<td>Potassium Hydroxide (CAS No) 1310-58-3</td>
<td>40.31</td>
<td></td>
<td>Acute Tox. 4 (Oral), H302</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Skin Corr. 1A, H314</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Eye Dam. 1, H318</td>
</tr>
</tbody>
</table>

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 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 : Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.

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 : Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER/doctor/physician if you feel unwell. Immediately call a POISON CENTER or doctor/physician.

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

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

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

Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

4.3. Indication of any immediate medical attention and special treatment needed
No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media


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

5.2. Special hazards arising from the substance or mixture

Reactivity : Thermal decomposition generates : Corrosive vapours.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel


Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.
6.3. Methods and material for containment and cleaning up
Methods for cleaning up: 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
Precautions for safe handling: 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, vapours, spray.

Hygiene measures: Do not eat, drink or smoke when using this product. 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 only in the original container in a cool, well ventilated place away from: incompatible materials. Keep container closed when not in use.
Incompatible products: Strong acids.
Incompatible products: Sources of ignition. Direct sunlight.

7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection
8.1. Control parameters
<table>
<thead>
<tr>
<th>Potassium Hydroxide (1310-58-3)</th>
<th>USA ACGIH</th>
<th>ACGIH Ceiling (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></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. Ensure exposure is below occupational exposure limits (where available).

Personal protective equipment: Avoid all unnecessary exposure.
Hand protection: Wear protective gloves.
Eye protection: Chemical goggles or face shield.
Skin and body protection: Wear suitable protective clothing.
Respiratory protection: Wear appropriate mask.
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
Physical state: Liquid
Colour: Colourless.
Odour: None.
Odour threshold: No data available
pH: \( \geq 14 \)
Relative evaporation rate (butylacetate=1): No data available
Melting point: No data available
Freezing point: No data available
Boiling point: No data available
Flash point: No data available
Self ignition temperature: No data available
Decomposition temperature: No data available
Flammability (solid, gas): No data available
Vapour pressure: No data available
Relative vapour density at 20 °C: No data available
## Potassium Hydroxide, 10.0N (10.0M)

### Safety Data Sheet

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<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Density</td>
<td>1.39 g/ml</td>
</tr>
<tr>
<td>Solubility</td>
<td>Soluble in water.</td>
</tr>
<tr>
<td>Log Pow</td>
<td>No data available</td>
</tr>
<tr>
<td>Log Kow</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity, kinematic</td>
<td>2.8 cSt</td>
</tr>
<tr>
<td>Viscosity, dynamic</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>
<tr>
<td>Explosive limits</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

Thermal decomposition generates: Corrosive vapours.

#### 10.2. Chemical stability

Absorbs the atmospheric CO2.

#### 10.3. Possibility of hazardous reactions

Reacts violently with acids.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

#### 10.5. Incompatible materials

Strong acids.

#### 10.6. Hazardous decomposition products

Potassium oxide. Thermal decomposition generates: Corrosive vapours.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

<table>
<thead>
<tr>
<th>Endpoint</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity</td>
<td>Harmful if swallowed.</td>
</tr>
<tr>
<td><strong>Potassium Hydroxide, 10.0N (10.0M)</strong></td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>674 mg/kg</td>
</tr>
<tr>
<td><strong>Potassium Hydroxide (1310-58-3)</strong></td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>333 mg/kg (Rat; Experimental value,Rat; Experimental value)</td>
</tr>
<tr>
<td><strong>Water (7732-18-5)</strong></td>
<td></td>
</tr>
<tr>
<td>LD50 oral rat</td>
<td>≥ 90000 mg/kg</td>
</tr>
<tr>
<td>Skin corrosion/irritation</td>
<td>Causes severe skin burns and eye damage. pH: ≥ 14</td>
</tr>
<tr>
<td>Serious eye damage/irritation</td>
<td>Causes serious eye damage. pH: ≥ 14</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>Not classified</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Carcinogenicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Reproductive toxicity</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Specific target organ toxicity (repeated exposure)</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aspiration hazard</td>
<td>Not classified</td>
</tr>
</tbody>
</table>
Potential Adverse human health effects and symptoms:
- Symptoms/injuries after eye contact: Causes serious eye damage.
- Symptoms/injuries after ingestion: Swallowing a small quantity of this material will result in serious health hazard.

**SECTION 12: Ecological information**

12.1 Toxicity
Ecology - water: Harmful to aquatic life.

**Potassium Hydroxide (1310-58-3)**
- LC50 fishes 1: > 28.6 mg/l (96 h; Pisces; Lethal)
- LC50 fish 2: 80 mg/l (Gambusia affinis)
- TLM fish 1: 80 ppm (24 h; Gambusia affinis)

12.2 Persistence and degradability

**Potassium Hydroxide, 10.0N (10.0M)**
- Persistence and degradability: Not established.

**Potassium Hydroxide (1310-58-3)**
- Persistence and degradability: Biodegradability: not applicable.
- Biochemical oxygen demand (BOD): Not applicable
- Chemical oxygen demand (COD): Not applicable
- ThOD: Not applicable
- BOD (% of ThOD): Not applicable

**Water (7732-18-5)**
- Persistence and degradability: Not established.

12.3 Bioaccumulative potential

**Potassium Hydroxide, 10.0N (10.0M)**
- Bioaccumulative potential: Not established.

**Potassium Hydroxide (1310-58-3)**
- Bioaccumulative potential: Bioaccumulation: not applicable.

**Water (7732-18-5)**
- Bioaccumulative potential: Not established.

12.4 Mobility in soil
No additional information available

12.5 Other adverse effects
Other information: Avoid release to the environment.

**SECTION 13: Disposal considerations**

13.1 Waste treatment methods

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

Ecology - waste materials: Avoid release to the environment.

**SECTION 14: Transport information**

In accordance with DOT
- Transport document description: UN1814 Potassium hydroxide, solution, 8, II
- UN-No.(DOT): 1814
- DOT NA no.: UN1814
- DOT Proper Shipping Name: Potassium hydroxide, solution
- Department of Transportation (DOT) Hazard Classes: 8 - Class 8 - Corrosive material 49 CFR 173.136
### Potassium Hydroxide, 10.0N (10.0M)

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<table>
<thead>
<tr>
<th>Hazard labels (DOT)</th>
<th>8 - Corrosive substances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packing group (DOT)</td>
<td>II - Medium Danger</td>
</tr>
<tr>
<td>DOT Special Provisions (49 CFR 172.102)</td>
<td>B2 - MC 300, MC 301, MC 302, MC 303, MC 305, and MC 306 and DOT 406 cargo tanks are not authorized. 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. T7 - 4 178.274(d)(2) Normal............ 178.275(d)(3) TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 95 / (1 + a (tr - tf)) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: a = (d15 - d50) / 35*d50 Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.</td>
</tr>
<tr>
<td>DOT Packaging Exceptions (49 CFR 173.xxx)</td>
<td>154</td>
</tr>
<tr>
<td>DOT Packaging Non Bulk (49 CFR 173.xxx)</td>
<td>202</td>
</tr>
<tr>
<td>DOT Packaging Bulk (49 CFR 173.xxx)</td>
<td>242</td>
</tr>
<tr>
<td>DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)</td>
<td>1 L</td>
</tr>
<tr>
<td>DOT Quantity Limitations Cargo aircraft only (49 CFR 173.27)</td>
<td>30 L</td>
</tr>
<tr>
<td>DOT Vessel Stowage Location</td>
<td>A - The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel.</td>
</tr>
<tr>
<td>DOT Vessel Stowage Other</td>
<td>52 - Stow “separated from” acids</td>
</tr>
</tbody>
</table>

**Additional information**

Other information : No supplementary information available.

**ADR**

Transport document description :

**Transport by sea**

No additional information available

**Air transport**

No additional information available

### SECTION 15: Regulatory information

**15.1. US Federal regulations**

<table>
<thead>
<tr>
<th>Potassium Hydroxide, 10.0N (10.0M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>SARA Section 311/312 Hazard Classes</td>
</tr>
<tr>
<td>Potassium Hydroxide (1310-58-3)</td>
</tr>
<tr>
<td>Listed on the United States TSCA (Toxic Substances Control Act) inventory</td>
</tr>
<tr>
<td>RQ (Reportable quantity, section 304 of EPA's List of Lists) :</td>
</tr>
<tr>
<td>SARA Section 311/312 Hazard Classes</td>
</tr>
</tbody>
</table>

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

Listed on the United States TSCA (Toxic Substances Control Act) inventory

**15.2. International regulations**

**CANADA**

<table>
<thead>
<tr>
<th>Potassium Hydroxide, 10.0N (10.0M)</th>
</tr>
</thead>
<tbody>
<tr>
<td>WHMIS Classification</td>
</tr>
</tbody>
</table>
### Potassium Hydroxide, 10.0N (10.0M) Safety Data Sheet

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<table>
<thead>
<tr>
<th>Potassium Hydroxide (1310-58-3)</th>
<th>WHMIS Classification</th>
<th>Class E - Corrosive Material</th>
</tr>
</thead>
</table>

| Water (7732-18-5) | WHMIS Classification | Uncontrolled product according to WHMIS classification criteria |

### EU-Regulations

No additional information available

### Classification according to Regulation (EC) No. 1272/2008 [CLP]

### Classification according to Directive 67/548/EEC or 1999/45/EC

Not classified

#### National regulations

No additional information available

#### US State regulations

No additional information available

### SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

<table>
<thead>
<tr>
<th>Acute Tox. 4 (Oral)</th>
<th>Acute toxicity (oral), Category 4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aquatic Acute 3</td>
<td>Hazardous to the aquatic environment — AcuteHazard, Category 3</td>
</tr>
<tr>
<td>Eye Dam. 1</td>
<td>Serious eye damage/eye irritation, Category 1</td>
</tr>
<tr>
<td>Skin Corr. 1A</td>
<td>Skin corrosion/irritation, Category 1A</td>
</tr>
<tr>
<td>Skin Corr. 1B</td>
<td>Skin corrosion/irritation, Category 1B</td>
</tr>
<tr>
<td>H302</td>
<td>Harmful if swallowed</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 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.

**NFPA fire hazard**

: 0 - Materials that will not burn.

**NFPA reactivity**

: 1 - Normally stable, but can become unstable at elevated temperatures and pressures or may react with water with some release of energy, but not violently.

**HMIS III Rating**

**Health**

: 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

**Flammability**

: 0 Minimal Hazard

**Physical**

: 1 Slight Hazard

**Personal Protection**

: H

SDS US (GHS HazCom 2012)

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