SECTION 1: Identification

1.1. Identification
Product form : Mixtures
Product name : Potassium Hydroxide, 0.1N (0.1M) in Isopropanol
Product code : LC19550

1.2. Recommended use and restrictions on use
Use of the substance/mixture : For laboratory and manufacturing use only.
Recommended use : Laboratory chemicals
Restrictions on use : Not for food, drug or household use

1.3. Supplier
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
- Flammable liquids Category 2 H225 Highly flammable liquid and vapour
- Serious eye damage/eye irritation Category 2A H319 Causes serious eye irritation
- Specific target organ toxicity (single exposure) Category 3 H335 May cause respiratory irritation

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements
GHS-US labeling
- Hazard pictograms (GHS-US) :
  - GHS02
  - GHS07
- Signal word (GHS-US) : Danger
- Hazard statements (GHS-US) :
  - H225 - Highly flammable liquid and vapour
  - H319 - Causes serious eye irritation
  - H335 - May cause respiratory irritation
- Precautionary statements (GHS-US) :
  - P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking.
  - P233 - Keep container tightly closed.
  - P240 - Ground/bond container and receiving equipment.
  - P241 - Use explosion-proof electrical, ventilating, lighting equipment
  - P242 - Use only non-sparking tools.
  - P243 - Take precautionary measures against static discharge.
  - P261 - Avoid breathing mist, vapors, spray.
  - P264 - Wash exposed skin thoroughly after handling.
  - P271 - Use only outdoors or in a well-ventilated area.
  - P280 - Wear protective gloves, protective clothing, eye protection, face protection.
  - P303+P361+P337 - 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
  - P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
  - P337+P313 - If eye irritation persists: Get medical advice/attention.
Potassium Hydroxide, 0.1N (0.1M) in Isopropanol  
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P370+P378 - In case of fire: Use carbon dioxide (CO2), powder, alcohol-resistant foam to extinguish  
P403+P235 - Store in a well-ventilated place. Keep cool.  
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 which do not result in classification

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

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>Isopropyl Alcohol (2-Propanol)</td>
<td>(CAS-No.) 67-63-0</td>
<td>99.4</td>
<td>Flam. Liq. 2, H225, Eye Irrit. 2A, H319, STOT SE 3, H335</td>
</tr>
<tr>
<td>Potassium Hydroxide</td>
<td>(CAS-No.) 1310-58-3</td>
<td>0.6</td>
<td>Acute Tox. 4 (Oral), H302, Skin Corr. 1A, H314, 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. Call a POISON CENTER or doctor/physician if you feel unwell.

First-aid measures after skin contact: Rinse skin with water/shower. Remove/Take off immediately all contaminated clothing.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion: Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

4.2. Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation: May cause drowsiness or dizziness.

Symptoms/effects after eye contact: Causes serious eye irritation.


4.3. Immediate medical attention and special treatment, if necessary

Obtain medical assistance.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media


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

5.2. Specific hazards arising from the chemical

Fire hazard: Highly flammable liquid and vapor.

Explosion hazard: May form flammable/explosive vapor-air mixture.

5.3. Special protective equipment and precautions for fire-fighters

Firefighting instructions: Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering 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

General measures: Remove ignition sources. Use special care to avoid static electric charges. No naked lights. No smoking.

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. Avoid breathing mist, spray.

Emergency procedures: Ventilate area.

6.2. Environmental precautions

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

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

Additional hazards when processed: Handle empty containers with care because residual vapors are flammable.

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 vapor. No naked lights. No smoking. Use only non-sparking tools. Avoid breathing mist, vapors, spray. Use only outdoors or in a well-ventilated area.

Hygiene measures: Wash exposed skin thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures: Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting/… equipment.

Storage conditions: Keep only in the original container in a cool, well-ventilated place away from: Heat sources, Ignition sources, incompatible materials. Keep in fireproof place. Keep container tightly closed.


Incompatible materials: Sources of ignition. Direct sunlight. Heat sources.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

<table>
<thead>
<tr>
<th>Potassium Hydroxide (1310-58-3)</th>
<th>ACGIH Ceiling (mg/m³)</th>
<th>NIOSH REL (ceiling) (ppm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>2 mg/m³ (Potassium hydroxide; USA; Momentary value; TLV - Adopted Value)</td>
<td></td>
</tr>
<tr>
<td>NIOSH</td>
<td>2 ppm</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Isopropyl Alcohol (2-Propanol) (67-63-0)</th>
<th>ACGIH TWA (ppm)</th>
<th>ACGIH STEL (ppm)</th>
<th>OSHA PEL (TWA) (mg/m³)</th>
<th>OSHA PEL (TWA) (ppm)</th>
<th>US IDLH (ppm)</th>
<th>NIOSH REL (TWA) (mg/m³)</th>
<th>NIOSH REL (TWA) (ppm)</th>
<th>NIOSH REL (STEL) (mg/m³)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACGIH</td>
<td>200 ppm (2-propanol; USA; Time-weighted average exposure limit 8 h; TLV - Adopted Value)</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ACGIH</td>
<td>400 ppm (2-propanol; USA; Short time value; TLV - Adopted Value)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td>980 mg/m³</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>OSHA</td>
<td>400 ppm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IDLH</td>
<td>2000 ppm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIOSH</td>
<td>980 mg/m³</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIOSH</td>
<td>400 ppm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NIOSH</td>
<td>1225 mg/m³</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Potassium Hydroxide, 0.1N (0.1M) in Isopropanol

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<table>
<thead>
<tr>
<th>Isopropyl Alcohol (2-Propanol) (67-63-0)</th>
<th>NIOSH</th>
<th>NIOSH REL (STEL) (ppm)</th>
<th>500 ppm</th>
</tr>
</thead>
</table>

8.2. Appropriate engineering controls

Appropriate engineering controls: Ensure exposure is below occupational exposure limits (where available). Emergency eye wash fountains should be available in the immediate vicinity of any potential exposure.

8.3. Individual protection measures/Personal protective equipment

Personal protective equipment:

Safety glasses. Gloves.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or safety glasses

Skin and body protection:

Chemical resistant apron

Respiratory protection:

Where exposure through inhalation may occur from use, respiratory protection equipment is recommended.

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
Color: Colorless
Odor: sharp
Odor threshold: No data available
pH: No data available
Melting point: No data available
Freezing point: No data available
Boiling point: No data available
Flash point: No data available
Relative evaporation rate (butyl acetate=1): No data available
Flammability (solid, gas): Highly flammable liquid and vapor.
Vapor pressure: No data available
Relative vapor density at 20 °C: No data available
Relative density: No data available
Solubility: Soluble in water. Soluble in methanol. Soluble in ethanol.
Log Pow: No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Viscosity, kinematic: No data available
Viscosity, dynamic: No data available
Potassium Hydroxide, 0.1N (0.1M) in Isopropanol
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Explosion limits : No data available
Explosive properties : No data available.
Oxidizing properties : None.

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Highly flammable liquid and vapor. May form flammable/explosive vapor-air mixture.

10.3. Possibility of hazardous reactions
May react violently with oxidants.

10.4. Conditions to avoid
Direct sunlight. Extremely high or low temperatures. Open flame.

10.5. Incompatible materials

10.6. Hazardous decomposition products

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Likely routes of exposure : Skin and eye contact; Inhalation
Acute toxicity : Not classified

Potassium Hydroxide (1310-58-3)
LD50 oral rat 333 mg/kg (Rat; Equivalent or similar to OECD 425; Experimental value)
ATE US (oral) 333 mg/kg body weight

Isopropyl Alcohol (2-Propanol) (67-63-0)
LD50 dermal rabbit 12870 mg/kg (Rabbit; Experimental value; Equivalent or similar to OECD 402; 16.4; Rabbit)
LC50 inhalation rat (mg/l) 73 mg/l/4h (Rat)
ATE US (oral) 5045 mg/kg body weight
ATE US (dermal) 12870 mg/kg body weight
ATE US (vapors) 73 mg/l/4h
ATE US (dust, mist) 73 mg/l/4h
Skin corrosion/irritation : Not classified
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitization : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Isopropyl Alcohol (2-Propanol) (67-63-0)
IARC group 3 - Not classifiable
Reproductive toxicity : Not classified
Specific target organ toxicity – single exposure : May cause respiratory irritation.
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/effects after inhalation : May cause drowsiness or dizziness.
Potassium Hydroxide, 0.1N (0.1M) in Isopropanol

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Symptoms/effects after eye contact: Causes serious eye irritation.

**SECTION 12: Ecological Information**

**12.1. Toxicity**

<table>
<thead>
<tr>
<th>Substance</th>
<th>LC50 fish 2</th>
<th>EC50 Daphnia 2</th>
<th>Threshold limit algae 1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Hydroxide (1310-58-3)</td>
<td>80 mg/l (LC50; 96 h; Gambusia affinis; Static system; Fresh water)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Isopropyl Alcohol (2-Propanol) (67-63-0)</td>
<td>9640 mg/l (LC50; OECD 203: Fish, Acute Toxicity Test; 96 h; Pimephales promelas; Flow-through system; Fresh water; Experimental value)</td>
<td>13299 mg/l (EC50; Other; 48 h; Daphnia magna)</td>
<td>&gt; 1000 mg/l (EC50; UBA; 72 h; Scenedesmus subspicus)</td>
</tr>
</tbody>
</table>

**12.2. Persistence and degradability**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Persistence and degradability</th>
<th>Biodegradability</th>
<th>Biochemical oxygen demand (BOD)</th>
<th>Chemical oxygen demand (COD)</th>
<th>ThOD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Hydroxide (1310-58-3)</td>
<td>Not established.</td>
<td>Biodegradability: not applicable.</td>
<td>Not applicable</td>
<td>Not applicable</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Isopropyl Alcohol (2-Propanol) (67-63-0)</td>
<td>Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No test data on mobility of the substance available.</td>
<td>Low potential for bioaccumulation (Log Kow &lt; 4).</td>
<td>1.19 g O₂/g substance</td>
<td>2.23 g O₂/g substance</td>
<td>2.4 g O₂/g substance</td>
</tr>
</tbody>
</table>

**12.3. Bioaccumulative potential**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Bioaccumulative potential</th>
<th>Bioaccumulation: not applicable.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Potassium Hydroxide (1310-58-3)</td>
<td>Not established.</td>
<td></td>
</tr>
<tr>
<td>Isopropyl Alcohol (2-Propanol) (67-63-0)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**12.4. Mobility in soil**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Surface tension</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isopropyl Alcohol (2-Propanol) (67-63-0)</td>
<td>0.021 N/m (25 °C)</td>
</tr>
</tbody>
</table>

**12.5. Other adverse effects**

Other information: Avoid release to the environment.

**SECTION 13: Disposal considerations**

**13.1. Disposal 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.

Additional information: Handle empty containers with care because residual vapors are flammable.

Ecology - waste materials: Avoid release to the environment.
**Potassium Hydroxide, 0.1N (0.1M) in Isopropanol**

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### SECTION 14: Transport information

**Department of Transportation (DOT)**

In accordance with DOT

- **Transport document description**: UN1993 Flammable liquids, n.o.s., 3, II
- **UN-No. (DOT)**: UN1993
- **Proper Shipping Name (DOT)**: Flammable liquids, n.o.s.
- **Transport hazard class(es) (DOT)**: 3 - Class 3 - Flammable and combustible liquid 49 CFR 173.120
- **Packing group (DOT)**: II - Medium Danger
- **Hazard labels (DOT)**: 3 - Flammable liquid

- **DOT Packaging Non Bulk (49 CFR 173.xxx)**: 202
- **DOT Packaging Bulk (49 CFR 173.xxx)**: 242
- **DOT Symbols**: G - Identifies PSN requiring a technical name
- **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. TP1 - The maximum degree of filling must not exceed the degree of filling determined by the following: Degree of filling = 97 / 1 + a (tr - tf) Where: tr is the maximum mean bulk temperature during transport, and tf is the temperature in degrees celsius of the liquid during filling. TP8 - A portable tank having a minimum test pressure of 1.5 bar (150 kPa) may be used when the flash point of the hazardous material transported is greater than 0 C (32 F). TP28 - A portable tank having a minimum test pressure of 2.65 bar (265 kPa) may be used provided the calculated test pressure is 2.65 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
- **DOT Packaging Exceptions (49 CFR 173.xxx)**: 150
- **DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)**: 5 L
- **DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)**: 60 L
- **DOT Vessel Stowage Location**: B - (i) The material may be stowed “on deck” or “under deck” on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length; and (ii) “On deck only” on passenger vessels in which the number of passengers specified in paragraph (k)(2)(i) of this section is exceeded.

Other information: No supplementary information available.

### SECTION 15: Regulatory information

#### 15.1. US Federal regulations

**Potassium Hydroxide, 0.1N (0.1M) in Isopropanol**

- **SARA Section 311/312 Hazard Classes**: Fire hazard

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

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

**Isopropyl Alcohol (2-Propanol)**

- **CAS-No.**: 67-63-0
- **RQ (Reportable quantity, section 304 of EPA’s List of Lists)**: 1000 lb
- **SARA Section 311/312 Hazard Classes**: Immediate (acute) health hazard

**Potassium Hydroxide (1310-58-3)**

- **RQ (Reportable quantity, section 304 of EPA’s List of Lists)**: 1000 lb
- **SARA Section 311/312 Hazard Classes**: Immediate (acute) health hazard
Potassium Hydroxide, 0.1N (0.1M) in Isopropanol

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Isopropyl Alcohol (2-Propanol) (67-63-0)

<table>
<thead>
<tr>
<th>SARA Section 311/312 Hazard Classes</th>
<th>Physical hazard - Flammable (gases, aerosols, liquids, or solids)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Health hazard - Serious eye damage or eye irritation</td>
</tr>
<tr>
<td></td>
<td>Health hazard - Specific target organ toxicity (single or repeated exposure)</td>
</tr>
</tbody>
</table>

15.2. International regulations

CANADA
No additional information available

EU-Regulations
No additional information available

National regulations
No additional information available

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 : 02/06/2018
Other information : None.

Full text of H-phrases: see section 16:

<table>
<thead>
<tr>
<th>H225</th>
<th>Highly flammable liquid and vapour</th>
</tr>
</thead>
<tbody>
<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>H319</td>
<td>Causes serious eye irritation</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation</td>
</tr>
<tr>
<td>H402</td>
<td>Harmful to aquatic life</td>
</tr>
</tbody>
</table>

NFPA health hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA fire hazard : 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

NFPA reactivity : 0 - Material that in themselves are normally stable, even under fire conditions.

Hazard Rating

Health : 2 Moderate Hazard - Temporary or minor injury may occur

Flammability : 3 Serious Hazard - Materials capable of ignition under almost all normal temperature conditions. Includes flammable liquids with flash points below 73 F and boiling points above 100 F. as well as liquids with flash points between 73 F and 100 F. (Classes IB & IC)

Physical : 0 Minimal Hazard - Materials that are normally stable, even under fire conditions, and will NOT react with water, polymerize, decompose, condense, or self-react. Non-Explosives.

Personal protection : H

H - Splash goggles, Gloves, Synthetic apron, Vapor respirator

SDS US LabChem

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