Section 1 - Product and Company Information

Product Name: HYDROGEN PEROXIDE-18O2 (SOLN IN H2O), 90 ATOM% 18O
Product Number: 609978
Brand: ALDRICH
Company: Sigma-Aldrich
Address: 3050 Spruce Street
SAINT LOUIS MO 63103 US
Technical Phone: 800-325-5832
Fax: 800-325-5052
Emergency Phone: 314-776-6555

Section 2 - Composition/Information on Ingredient

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAS #</th>
<th>Percent</th>
<th>SARA 313</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROGEN PEROXIDE-18O2 (SOLN IN H2O), 90 ATOM% 18O</td>
<td>None</td>
<td>&lt;= 5</td>
<td>No</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredient Name</th>
<th>CAS #</th>
<th>Percent</th>
<th>SARA 313</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROGEN PEROXIDE</td>
<td>7722-84-1</td>
<td>&lt;= 5</td>
<td>No</td>
</tr>
<tr>
<td>WATER</td>
<td>7732-18-5</td>
<td>&gt;= 95</td>
<td>No</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

EMERGENCY OVERVIEW
Target organ(s): Eyes. Skin.

HMIS RATING
HEALTH: 0
FLAMMABILITY: 0
REACTIVITY: 1

NFPA RATING
HEALTH: 0
FLAMMABILITY: 0
REACTIVITY: 1

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE
If swallowed, wash out mouth with water provided person is conscious. Call a physician.

INHALATION EXPOSURE
If inhaled, remove to fresh air. If breathing becomes difficult, call a physician.

DERMAL EXPOSURE
In case of contact, immediately wash skin with soap and copious
amounts of water.

**EYE EXPOSURE**
In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

**Section 5 - Fire Fighting Measures**

**FLASH POINT**
N/A

**AUTOIGNITION TEMP**
N/A

**FLAMMABILITY**
N/A

**EXTINGUISHING MEDIA**
Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

**FIREFIGHTING**
Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Emits toxic fumes under fire conditions.

**Section 6 - Accidental Release Measures**

**METHODS FOR CLEANING UP**
Absorb on sand or vermiculite and place in closed containers for disposal. Ventilate area and wash spill site after material pickup is complete.

**Section 7 - Handling and Storage**

**HANDLING**
User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

**STORAGE**
Suitable: Keep tightly closed.
Store at -20°C

**SPECIAL REQUIREMENTS**
Light sensitive.

**Section 8 - Exposure Controls / PPE**

**ENGINEERING CONTROLS**
Safety shower and eye bath. Mechanical exhaust required.

**PERSONAL PROTECTIVE EQUIPMENT**
Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Respiratory protection is not required. Where protection is desired, use multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges.
Hand: Protective gloves.
Eye: Chemical safety goggles.

**GENERAL HYGIENE MEASURES**
Wash thoroughly after handling.

**EXPOSURE LIMITS**

<table>
<thead>
<tr>
<th>Country</th>
<th>Source</th>
<th>Type</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poland</td>
<td>NDS</td>
<td>1.5 MG/M3</td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>NDSCh</td>
<td>4 MG/M3</td>
<td></td>
</tr>
<tr>
<td>Poland</td>
<td>NDSP</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

**Section 9 - Physical/Chemical Properties**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>At Temperature or Pressure</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Appearance</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical State</td>
<td>Clear liquid</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Colorless</td>
<td></td>
</tr>
<tr>
<td><strong>pH</strong></td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>BP/BP Range</strong></td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>MP/MP Range</strong></td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Freezing Point</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Vapor Pressure</strong></td>
<td>23.3 mmHg</td>
<td>30 °C</td>
</tr>
<tr>
<td><strong>Vapor Density</strong></td>
<td>1.1 g/l</td>
<td></td>
</tr>
<tr>
<td><strong>Saturated Vapor Conc.</strong></td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>SG/Density</strong></td>
<td>1 g/cm³</td>
<td></td>
</tr>
<tr>
<td><strong>Bulk Density</strong></td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Volatile%</strong></td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>VOC Content</strong></td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Water Content</strong></td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Solvent Content</strong></td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Evaporation Rate</strong></td>
<td>N/A</td>
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</tr>
<tr>
<td><strong>Viscosity</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Surface Tension</strong></td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Partition Coefficient</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Decomposition Temp.</strong></td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Flash Point</strong></td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Explosion Limits</strong></td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Flammability</strong></td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Autoignition Temp</strong></td>
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<td></td>
</tr>
<tr>
<td><strong>Refractive Index</strong></td>
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</tr>
<tr>
<td><strong>Optical Rotation</strong></td>
<td>N/A</td>
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</tr>
<tr>
<td><strong>Miscellaneous Data</strong></td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td><strong>Solubility</strong></td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>

N/A = not available

**Section 10 - Stability and Reactivity**

**STABILITY**
- Stable.
- Conditions to Avoid: Light. Rust.
- Materials to Avoid: Brass Iron and iron salts., Finely powdered metals Copper, Copper alloys, Galvanized iron, Zinc, Nickel

**HAZARDOUS DECOMPOSITION PRODUCTS**
- Hazardous Decomposition Products: Oxygen.

**HAZARDOUS POLYMERIZATION**
- Hazardous Polymerization: Will not occur

**Section 11 - Toxicological Information**

**ROUTE OF EXPOSURE**
Skin Contact: May cause skin irritation. 
Skin Absorption: May be harmful if absorbed through the skin. 
Eye Contact: May cause eye irritation. 
Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled. 
Ingestion: May be harmful if swallowed.

TARGET ORGAN(S) OR SYSTEM(S) 
Eyes. Respiratory system. Skin.

SIGNS AND SYMPTOMS OF EXPOSURE 
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION 
Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT 
Proper Shipping Name: None 
Non-Hazardous for Transport: This substance is considered to be non-hazardous for transport.

IATA 
Non-Hazardous for Air Transport: Non-hazardous for air transport.

Section 15 - Regulatory Information

US CLASSIFICATION AND LABEL TEXT 
US Statements: Target organ(s): Eyes. Skin.

UNITED STATES REGULATORY INFORMATION 
SARA LISTED: No

CANADA REGULATORY INFORMATION 
WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR. 
DSL: No 
NDSL: No

Section 16 - Other Information

DISCLAIMER 
For R&D use only. Not for drug, household or other uses.

WARRANTY 
The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our
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