**Section 1 - Product and Company Information**

**Product Name:** Hydrogen peroxide solution, 30% (w/w)

**Product Number:** H1009

**Brand:** Sigma Chemical

**Company:** Sigma-Aldrich

**Address:** 3050 Spruce Street

**City, State, Zip, Country:** SAINT LOUIS, MO 63105 US

**Technical Phone:** 314 771 5765

**Fax:** 800 325 5032

**Emergency Phone:** 414 273 3850 Ext. 5896

**Section 2 - Composition/Information on Ingredient**

<table>
<thead>
<tr>
<th>Substance Name</th>
<th>CAS #</th>
<th>SARA 313</th>
<th>EC no</th>
<th>Annex I Index</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROGEN PEROXIDE, 30% SOLUTION</td>
<td>7722-84-1</td>
<td>No</td>
<td>251-765-0</td>
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</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>30.000 %</td>
<td>Yes</td>
</tr>
<tr>
<td>WATER</td>
<td>7732-10-5</td>
<td>70.000 %</td>
<td>No</td>
</tr>
</tbody>
</table>

**Formula:** H2O2

**Synonyms:** Albone 35, Albone G, Albine 70, Albine 35CG, Albine 50CG, Albine 70CG, Hydrogen peroxide, solution, 30%, Interox, Kastone, Perone 30, Perone 35, Perone 50

**Section 3 - Hazards Identification**

**Emergency Overview:**
- Harmful
- Harmful if swallowed. Risk of serious damage to eyes.
- Possible Carcinogen (US). Target organ(s): Eyes. Respiratory system.

**HMIS Rating:**
- Health: 3
- Flammability: 0
- Reactivity: 0

**NFPA Rating:**
- Health: 3
- Flammability: 0
- Reactivity: 0

*additional chronic hazards present.

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**

**Autoignition Temp:** 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**

**Procedure to be Followed in Case of Leak or Spill:**
Evacuate area.

**Procedure(s) of Personal Precaution(s):**
- Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

**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
- Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

**Storage:**
- Suitable
- Keep tightly closed. Store at 2-8°C

**Section 8 - Exposure Controls / PPE**

**Engineering Controls:**
- Safety shower and eye bath. Mechanical exhaust required.

**Personal Protective Equipment:**
- Respiratory
- Government-approved respirator.
- Hand
- Compatible chemical-resistant gloves.
- Eye
- Chemical safety goggles.

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### Section 9 - Physical/Chemical Properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td></td>
</tr>
<tr>
<td>Physical State</td>
<td>Clear liquid</td>
</tr>
<tr>
<td>Color</td>
<td>Colorless</td>
</tr>
<tr>
<td>Molecular Weight:</td>
<td>N/A</td>
</tr>
<tr>
<td>pH</td>
<td>N/A</td>
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<tr>
<td>BP/VP Range</td>
<td>N/A</td>
</tr>
<tr>
<td>MPR/MVP Range</td>
<td>N/A</td>
</tr>
<tr>
<td>Freezing Point</td>
<td>N/A</td>
</tr>
<tr>
<td>Vapor Pressure</td>
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</tr>
<tr>
<td>Vapor Density</td>
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<tr>
<td>Saturated Vapor Conc.</td>
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<tr>
<td>SG/Density</td>
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<tr>
<td>Bulk Density</td>
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</tr>
<tr>
<td>Odor Threshold</td>
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</tr>
<tr>
<td>Viscosity</td>
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<tr>
<td>VOC Content</td>
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<tr>
<td>Water Content</td>
<td>N/A</td>
</tr>
<tr>
<td>Solvent Content</td>
<td>N/A</td>
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<tr>
<td>Evaporation Rate</td>
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</tr>
<tr>
<td>Partition Coefficient</td>
<td>N/A</td>
</tr>
<tr>
<td>Decomposition Temp.</td>
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</tr>
<tr>
<td>Flash Point °F</td>
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<tr>
<td>Flash Point °C</td>
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<tr>
<td>Explosion Limits</td>
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<tr>
<td>Flammability</td>
<td>N/A</td>
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<tr>
<td>Autoignition Temp</td>
<td>N/A</td>
</tr>
<tr>
<td>Solubility</td>
<td>N/A</td>
</tr>
</tbody>
</table>

N/A = not available

### Section 10 - Stability and Reactivity

#### Stability
- Stable
- Stable

#### Materials to Avoid
- Strong oxidizing agents.

#### Hazardous Decomposition Products
- Hazardous Decomposition Products

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### 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**
  - Causes severe eye irritation.
- **Inhalation**
  - May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.
- **Ingestion**
  - Harmful if swallowed.

#### Target Organ(s) or System(s)
- Eyes: Skin: Respiratory system.

#### Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

#### RTECS Number:
- MX6899000

#### Toxicity Data
- **Oral - Woman:** 2.626 mg/kg (LD₅₀)
  - Remarks: Behavioral:Coma.
  - Lung: Thorax, or Respiration:Cyanosis.
  - Gastrointestinal: Nausea or vomiting.
- **Oral - Man:** 1429 mg/kg (LD₅₀)
  - Remarks: Behavioral:Coma.
  - Gastrointestinal: Changes in structure or function of esophagus.
  - Gastrointestinal: Nausea or vomiting.
- **Skin - Rat:** 3000 mg/kg (LD₅₀)
- **Intravenous - Mouse:** >50 GM/KG (LD₅₀)
- **Oral - Rabbit:** 820 mg/kg (LD₅₀)
  - Remarks: Gastrointestinal:Parotitis.
  - Blood: Pigmented or nucleated red blood cells.
  - Blood: Changes in leukocyte (WBC) count.

#### Chronic Exposure - Carcinogen
- **Result:** This product is or contains a component that is not classifiable as to its carcinogenicity based on its IARC, ACGIH, NTP, or EPA classification.
- **Mouse - Oral:** 622 GMA/KG 2 Y C
- **Mouse - Oral:** 155 GMA/KG 2 Y C

#### IARC Carcinogen List
- **Rating:** Group 3

#### ACGIH Carcinogen List
- **Rating:** A3

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Chronic Exposure - Mutagen

Species | Cell Type | Mutation Test
---------|-----------|----------------
Human 9 UMOL/L | lymphocyte | DNA damage
Human 50 UMOL/L | Embryo | Other mutation test systems
Human 20 UMOL/L | Embryo | Cytogenetic analysis
Flat 50 UMOL/L | lymphocyte | DNA damage
Hamster 250 UMOL/L | ovary | DNA inhibition
Hamster 60 UMOL/L | ovary | Cytogenetic analysis
Hamster 40 UMOL/L | ovary | Sister chromatid exchange
Hamster 1 MMD/L | lung | Mutation in mammalian somatic cells.

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. Disperse 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: Hydrogen peroxide, aqueous solutions (with not less than 20 percent but not more than 40 percent hydrogen peroxide (stabilized as necessary)
UN#: 2014
Class: 5.1
Packing Group: Packing Group II
Hazard Label: Oxidizer
Hazard Label: Corrosive
PIR: Not PIR

IATA
Proper Shipping Name: Hydrogen peroxide, aqueous solution
IATA UN Number: 2014
Hazard Class: 5.1
Packing Group: II

Section 15 - Regulatory Information

EU Additional Classification
Symbol of Danger: Xn
Indication of Danger
Harmful.
Risk Statements: R: 22 41
Harmful if swallowed. Risk of serious damage to eyes.
Safety Statements: S: 26 39
In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear eye/face protection.

US Classification and Label Text
Indication of Danger
Harmful.
Risk Statements: Harmful if swallowed. Risk of serious damage to eyes.
Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear eye/face protection.

US Statements
Possible Carcinogen (US). Target organ(s): Eyes. Respiratory system.

United States Regulatory Information
SARA Listed: No

TSCA Inventory Item: Yes

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: Yes
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 knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2006 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.