Safety Data Sheet

HYDROGEN PEROXIDE

Section 1. Identification

Product Identifier
HYDROGEN PEROXIDE

Synonyms
MDS098001Z ; MDS098001H ; HDX10; HDX11; MDS098014; MDS098002; MDS098015 ; MSD_SDS0052

Manufacturer Stock Numbers
MDS098001H ; MDS098001Z ; HDX10; HDX11; MDS098014; MDS098002; MDS098015

Recommended use
First Aid Antiseptic, Oral Debriding Agent

Uses advised against
Use only as directed.

Manufacturer Contact
Address
Medline Industries, Inc.
3 Lakes Drive
Northfield, IL, 60093
USA

Phone
(800) 633-5463

Emergency Phone
(800) 424-9300
CHEMTREC

Fax
(847) 643-4436

Website
www.Medline.com

Section 2. Hazards Identification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Classification
SERIOUS EYE DAMAGE /EYE IRRITATION - Category 1
SKIN CORROSION/IRRITATION - Category 2

Signal Word
Danger
Section 3. Ingredients

<table>
<thead>
<tr>
<th>CAS</th>
<th>Ingredient Name</th>
<th>Weight %</th>
</tr>
</thead>
<tbody>
<tr>
<td>7732-18-5</td>
<td>Water</td>
<td>50% - 100%</td>
</tr>
<tr>
<td>7722-84-1</td>
<td>Hydrogen peroxide (H2O2)</td>
<td>0 - 10%</td>
</tr>
</tbody>
</table>

* The exact percentage (concentration) of composition has been withheld as a trade secret.

Section 4. First-Aid Measures

General Advice: Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.
Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Remove contact lenses, if present and easy to do. Continue rinsing. Do not rub affected area. Seek immediate medical attention/advice.

Skin Contact: In the case of skin irritation or allergic reactions, wash off immediately with soap and plenty of water for at least 15 minutes. Get medical attention if irritation persists.

Inhalation: Remove to fresh air. Get medical attention immediately if symptoms occur.

Ingestion: Rinse mouth immediately and drink plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Call a physician.

Self-protection of the first aider: Avoid contact with skin, eyes or clothing. Use personal protective equipment as required. Wear personal protective clothing (see section 8).

Most important symptoms and effects, both acute and delayed: Most Important Symptoms and Effects: Burning sensation.

Indication of any immediate medical attention and special treatment needed: Notes to Physician: Treat symptomatically.

Section 5. Fire Fighting Measures

| Suitable Extinguishing Media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable Extinguishing Media | CAUTION: Use of water spray when fighting fire may be inefficient. |
| Specific hazards arising from the chemical: | No information available. |
| Uniform Fire Code: | Irritant: Liquid |
| Hazardous combustion products: | Carbon oxides. |
| Explosion data: | Sensitivity to Mechanical Impact: No Sensitivity to Static Discharge: No |
| Protective Equipment and Precautions for Firefighters: | As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. |

Section 6. Accidental Release Measures

| Personal Precautions, Protective Equipment and Emergency Procedures: | Personal Precautions: Avoid contact with eyes and clothing. Ensure adequate ventilation. Use personal protective equipment as required. |
| Other information: | Refer to protective measures listed in Sections 7 and 8. |
| Environmental Precautions: | Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. |
Methods and Materials for Containment and Cleaning up:

**Methods for Containment:**
Prevent further leakage or spillage if safe to do so.

**Methods for Cleaning up:**
Soak up with inert absorbent material. Pick up and transfer to properly labeled containers.

### Section 7. Handling and Storage

**Precautions for Safe Handling:**
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Take off contaminated clothing and wash before reuse.

**Conditions for safe storage, including any incompatibilities:**
Keep container tightly closed in a dry, cool and well-ventilated place. Store locked up. Keep out of the reach of children.

**Incompatible Products:**

### Section 8. Exposure Controls/Personal Protection

<table>
<thead>
<tr>
<th>Occupational Exposure Limits</th>
<th>Ingredient Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Water</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td></td>
<td>Hydrogen peroxide (H2O2)</td>
<td>TWA: 1 ppm</td>
<td>TWA: 1 ppm</td>
<td>N/A</td>
</tr>
</tbody>
</table>

**Personal Protective Equipment Control parameters:**
Goggles, Gloves

**Exposure Guidelines:**
There is no exposure data pertaining to the product. This section reflects exposure data pertaining to individual ingredients.

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

**Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992) See section 15 for national exposure control parameters.**

**Appropriate Engineering Controls:**
Showers
Eyewash stations
Ventilation systems

**Individual protection measures, such as personal protective equipment:**
Eye/face Protection:
Tightly sealing safety goggles.

Skin and Body Protection:
Wear protective gloves and clothing. Long sleeved clothing. Impervious
Respiratory Protection:
No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

Hygiene Measures:
Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Wear suitable gloves and eye/face protection. Do not eat, drink, or smoke when using this product.

Section 9. Physical and Chemical Properties

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Color</td>
<td>Clear, Colorless liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>Ozone-like to odorless</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No information available</td>
</tr>
<tr>
<td>Solubility</td>
<td>Miscible in water</td>
</tr>
<tr>
<td>Partition coefficient Water/n-octanol</td>
<td>No data available</td>
</tr>
<tr>
<td>VOC%</td>
<td>N/A</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>No data available</td>
</tr>
<tr>
<td>Density lbs/Gal</td>
<td>N/A</td>
</tr>
<tr>
<td>Pounds per Cubic Foot</td>
<td>N/A</td>
</tr>
<tr>
<td>Flash Point</td>
<td>No data available</td>
</tr>
<tr>
<td>FP Method</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>4.5</td>
</tr>
<tr>
<td>Melting Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Range</td>
<td>No data available</td>
</tr>
<tr>
<td>LEL</td>
<td>N/A</td>
</tr>
<tr>
<td>UEL</td>
<td>N/A</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability</td>
<td>No data available</td>
</tr>
</tbody>
</table>
Section 10. Stability and Reactivity

When used in accordance with the directions.

Reactivity: No data available.
Chemical Stability: Stable under recommended storage conditions.
Possibility of Hazardous Reactions: None under normal processing.
Hazardous Polymerization: Hazardous polymerization does not occur.
Conditions to avoid: None known based on information supplied.
Incompatibility (Materials to Avoid): Strong acids. Strong oxidizing agents.
Incompatibility (Materials to avoid): Strong bases.
Hazardous Decomposition or Byproducts: Carbon oxides.

Section 11. Toxicological Information

Information on likely routes of exposure:
Product information:
Eye contact: Specific test data for the substance or mixture is not available.
Skin contact: Specific test data for the substance or mixture is not available.
Inhalation: Specific test data for the substance or mixture is not available.
Ingestion: Specific test data for the substance or mixture is not available.

Component Information:
Chemical name:
Hydrogen Peroxide (Stabilized) 3% CAS-No. 7722-84-1
Oral LD50: = 801 mg/kg (Rat)
Dermal LD50: = 4060 mg/kg (Rat)
Inhalation LC50: = 2 g/m3 (Rat) 4 h

Purified Water CAS-No. 7732-18-5
Oral LD50: > 90mL/kg (Rat)
Dermal LD50: -
Inhalation LC50: -

Information on Toxicological Effects:

Symptoms:
May cause skin redness. May cause redness and tearing of the eyes. May cause blindness. Burning.

Delayed-immediate effects, also chronic effects from short & long term exposure:

Sensitization:
No information available.

Mutagenic Effects:
No information available.

Carcinogenicity:
The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical Name:
Hydrogen Peroxide (Stabilized) 3% CAS-No. 7722-84-1
ACGIH: A3
IARC: Group 3
NTP: -
OSHA: -

ACGIH (American Conference of Governmental Industrial Hygienists)
A3 - Animal Carcinogen

IARC (International Agency for Research on Cancer)
Group 3 - Not Classifiable as to Carcinogenicity in Humans

Reproductive Toxicity:
No information available.

Target Organ Effects:

Aspiration hazard:
No information available.

Numerical Measures of Toxicity:
The following values are calculated based on chapter 3.1 of the GHS document.

ATEmix (oral): 26,700.00 mg/kg
ATEmix (dermal): 66,667.00 mg/kg (ATE)
ATEmix (inhalation-dust/mist): 67.00 mg/l
ATEmix (inhalation-vapor): 367.00 ATEmix

Section 12. Ecological Information

There is no ecological data on the Product. The Product ingredients are expected to be safe for the environment at concentrations predicted under normal use and accidental spill scenarios. Packaging components are
compatible with the conventional solid waste management practices.

Ecotoxicity: No information available.
Persistence and degradability: No information available.
Bioaccumulation: No information available.
Other adverse effects: No information available.

Section 13. Disposal

Waste Treatment Methods: Disposal Methods:
This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). This material could become a hazardous waste if it is mixed with or otherwise comes in contact with a hazardous waste, if chemical additions are made to this material, or if the material is processed or otherwise altered. Consult 40 CFR 261 to determine whether the altered material is a hazardous waste. Consult the appropriate state, regional, or local regulations for additional requirements.

Contaminated packaging: Dispose of contents/containers in accordance with local regulations.
California Hazardous Waste Codes: 311

Section 14. Transport Information

UN Number: N/A
UN Proper Shipping Name: Not Regulated
DOT Classification: Not Regulated
Packing Group: Not Regulated

Section 15. Regulatory Information

SARA 311/312: Refer to Section 2 of the SDS.
SARA 302: Hydrogen Peroxide.
SARA 313: N.A.
TSCA: Components are on the TSCA inventory.
CERCLA Hazardous Substance List: N.A.
Clean Air Act (CAA) Section 112, 112 (r): N.A.
New Jersey Right to Know Components: HYDROGEN PEROXIDE.
Pennsylvania Right to Know Components: HYDROGEN PEROXIDE.
Massachusetts Right to Know Components: HYDROGEN PEROXIDE.

Section 16. Other Information
<table>
<thead>
<tr>
<th>Legend</th>
<th>N.A. - Not Applicable</th>
<th>N.E. - Not Established</th>
<th>N.D. - Not Determined</th>
</tr>
</thead>
<tbody>
<tr>
<td>HMIS (U.S.A.): Health Hazard</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HMIS (U.S.A.): Flammability</td>
<td>O</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HMIS (U.S.A.): Physical Hazard</td>
<td>O</td>
<td></td>
<td></td>
</tr>
<tr>
<td>HMIS (U.S.A.): Personal Protection</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Fire Protection Association (U.S.A): Health Hazard</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Fire Protection Association (U.S.A): Flammability</td>
<td>O</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Fire Protection Association (U.S.A): Instability Hazard</td>
<td>O</td>
<td></td>
<td></td>
</tr>
<tr>
<td>National Fire Protection Association (U.S.A): Physical and Chemical Hazards</td>
<td>None.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Additional Information

The information contained herein is furnished without warranty or legal responsibility of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determination of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees.