**Material Safety Data Sheet**

**Hydrogen Peroxide 30-50%**

**Section 1 - Chemical Product and Company Identification**

*MSDS Name:* Hydrogen Peroxide 30-50%


*Synonyms:* Carbamyl peroxide, hydrogen dioxide, hydrogen peroxide, urea peroxide, hydrogen peroxide 100 volumes.

*Company Identification:* Fisher Scientific

*Reagent Lane*

*Princeton, NJ 08540*

*For information, call: 201-795-7100*

*For CHEMTREC assistance, call: 800-424-9300*

*For International CHEMTREC assistance, call: 703-527-3887*

**Section 2 - Composition, Information on Ingredients**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen Peroxide</td>
<td>7722-54-1</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
</tr>
</tbody>
</table>

**Hazard Symbols:** O F

**Section 3 - Hazards Identification**

**Emergency Overview**

*Appearance: clear, colorless *

*Corrosive:* Strong oxidizer. Contact with combustible materials may cause a fire. Use water spray to keep fire-exposed containers cool. Wear appropriate protective clothing to prevent contact with skin and eyes. Wear a self-contained breathing apparatus (SCBA) to prevent contact with thermal decomposition products. Substance is noncombustible.

*Extinguishing Media:* Use water only. Do not use carbon dioxide. Do not use dry chemical.

*Autoignition Temperature:* Noncombustible

*Flash Point:* Noncombustible

*NFPA Rating:* Not published

*Explosion Limits,* Lower: 40

*Upper: 160

**Section 4 - First Aid Measures**

**Eyes:**

Contact with liquid is corrosive to the eyes and causes severe burns.

**Skin:**

Contact with liquid is corrosive to causes severe burns and ulceration.

**Ingestion:**

Causes gastrointestinal tract burns. May cause vascular collapse and death. May cause difficulty in swallowing, stomach distension, possible cerebral swelling and death.

**Inhalation:**

Causes chemical burns to the respiratory tract. May cause ulceration of nasal tissue, insomnia, nervous tremors with numb extremities, pulmonary edema, unconsciousness, and death.

**Chronic:**

Prolonged or repeated skin contact may cause dermatitis.

**Section 5 - Fire Fighting Measures**

**Physical State:** Liquid

**Appearance:** clear, colorless

**Odor:** None

**pH:** 2.5-3.5

**Vapor Pressure:** 23 mm Hg @30°C

**Vapor Density:** 1.0

**Evaporation Rate:** 1.0 (Butyl-acetate=1)

**Section 8 - Exposures, Personal Protection**

**Engineering Controls:**

Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Exercise care in cleaning all equipment before use with substance to prevent contamination.

**Exposure Limits**

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogen Peroxide</td>
<td>1 ppm</td>
<td>1.4 mg/m3</td>
<td>1 ppm TWA: 1.4 mg/m3 TWA</td>
</tr>
<tr>
<td>Water</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
</tbody>
</table>

**OSHA Vacated PELs:**

Hydrogen Peroxide: 1 ppm TWA: 1.4 mg/m3

**No OSHA Vacated PELs** are listed for this chemical.

**Section 9 - Physical and Chemical Properties**

<table>
<thead>
<tr>
<th>Physical State</th>
<th>Liquid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>clear, colorless</td>
</tr>
<tr>
<td>Odor</td>
<td>None</td>
</tr>
<tr>
<td>pH</td>
<td>2.5-3.5</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>23 mm Hg @30°C</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>1.0</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>1.0 (Butyl-acetate=1)</td>
</tr>
</tbody>
</table>
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Viscosity: 1.26 cp
Boiling Point: 226 deg F
Freezing/Melting Point: -26 deg F
Decomposition Temperature: Not available
Solubility: Miscible in water.
Specific Gravity/Density: 1-1.23 (90-
Molecular Formula: H2O2
Molecular Weight: 34.0128

*** SECTION 10 - STABILITY AND REACTIVITY ***

Chemical Stability: Decomposes slowly to release oxygen.

Conditions to Avoid: Incompatible materials, light, metals, excess heat, reducing agents, alkaline materials, strong oxidants.

Incompatibilities with Other Materials: Acetic acid, acetic anhydride, acetone, alcohols + sulfuric acid, ammonia and its carbonates, antimony trioxide, arsenic trioxide, boric acid, bromine, 1-butyl alcohol, cellulose, charcoal, chlorine, potassium hydroxide, chlorosulfonic acid, chromium, copper, cupric chloride, dimethyl benzylcarbinol, ethyl alcohol, ferrous sulfate, formaldehyde + organic matter, gold, hydrochloric acid, hydrogen sulfide, iron, isocyanates + nitric acid, lead, lead dioxide, lead monoxide, lead sulfide, lime water, magnesium, manganese, manganese dioxide, mercuric oxide, mercurochrome, nitric acid, organic matter, 1-phenyl-2-methylpropylacetone.

Hazardous Decomposition Products: Oxygen, hydrogen gas.

Hazardous Polymerization: Has not been reported.

*** SECTION 11 - TOXICOLOGICAL INFORMATION ***

RTCS#: CAS# 7722-84-1: MX0869000 MX09000000
LD50 (LD50):
CAS# 7722-18-5: Oral, rat: LD50 = 90 mL/kg.
CAS# 7722-18-5: Oral, rat: LD50 = 90 mL/kg.
Carcinogenicity: Hydrogen peroxide - IARC Group 3 carcinogen.
Water: Not listed by AGCH, IARC, NIOSH, NTP, or OSHA.
Epidemiology: No information available.
Teratogenicity: No information available.
Reproductive Effects: No information available.
Neurotoxicity: No information available.
Mutagenicity: No information available.
Other Studies: None.

*** SECTION 12 - ECOLOGICAL INFORMATION ***

Ecotoxicity: Fingering trout. 40 ppm/48H is toxic. Fathead minnow LC50 = 22-35 gm/L/96H.
Environmental Fate:
No information reported.
Physical/Chemical:
No information available.
Other:
None.

*** SECTION 13 - DISPOSAL CONSIDERATIONS ***

Dispose of in a manner consistent with federal, state, and local regulations.
RCRA D-Series Maximum Concentration of Contaminants: Not listed.
RCRA D-Series Chronic Toxicity Reference Levels: Not listed.
RCRA F-Series: Not listed.
RCRA P-Series: Not listed.
RCRA U-Series: Not listed.
Not listed as a material banned from land disposal according to RCRA.

*** SECTION 14 - TRANSPORT INFORMATION ***

US DOT Shipping Name: HYDROGEN PEROXIDE, AQUEOUS SOLUTIONS 30%
Hazard Class: 5.1
UN Number: UN1024
Packing Group: II
IMO No: No information available.
IATA No: No information available.

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No information available.
RID/ADR No information available.
Canada:
Shipping Name: HYDROGEN PEROXIDE
Hazard Class: 5.1
UN Number: UN1024

*** SECTION 15 - REGULATORY INFORMATION ***

FEDERAL
TSCA:
CAS# 7722-84-1 is listed on the TSCA inventory.
CAS# 7722-18-5 is listed on the TSCA inventory.

Health & Safety Reporting List:
None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules:
None of the chemicals in this product are under a Chemical Test Rule.

Section 126:
None of the chemicals on the list under TSCA Section 126.

TSCA Significant New Use Rule:
None of the chemicals in this material have a SNUR under TSCA.

SARA:
Section 311 (RQ):
None of the chemicals in this material have an RQ.

Section 312:
CAS# 7722-84-1: concentration 52% TPO = 1000 pounds
CAS# 7722-18-5: acute, flammable.

Section 313:
No chemicals are reportable under Section 313.

Clean Air Act:
This material does not contain any hazardous air pollutants.
This material does not contain any Class 1 ozone depletors.
This material does not contain any Class 2 ozone depletors.

Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA:
CAS# 7722-84-1 is considered highly hazardous by OSHA.

STATE.
Hydrogen peroxide can be found on the following state right to know lists: New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

Not present on state lists from CA, PA, MA, FL, or NJ.

California No Significant Risk Level:
None of the chemicals in this product are listed.

INTERNATIONAL
European Labelling in Accordance with EC Directives
RTEC:
Safety Phrases:
S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S 28 After contact with skin, wash immediately with plenty of water.
S 3 Keep in a cool place.
S 36/37 Wear suitable protective clothing and eye/face protection.
S 28A After contact with skin, wash immediately with plenty of water.

Canada:
CAS# 7722-84-1 is listed on Canada’s DOL/DOL List.
CAS# 7722-18-5 is listed on Canada’s DOL/DOL List.
CAS# 7722-84-1 is listed on Canada’s Ingredient Disclosure List.
CAS# 7722-18-5 is not listed on Canada’s Ingredient Disclosure List.

Exposure Limits:
CAS# 7722-84-1: OEL-AUSTRALIA-TWA 1 ppm (1.5 mg/m3), OEL-BELGIUM-TWA 1 ppm (1.4 mg/m3), OEL-DENMARK-TWA 1 ppm (1.4 mg/m3), OEL-FINLAND-TWA 1 ppm (1.4 mg/m3), OEL-GERMANY-TWA 1 ppm (1.4 mg/m3), OEL-NETHERLANDS-TWA 1 ppm (1.4 mg/m3), OEL-PHILIPPINES-TWA 1 ppm (1.4 mg/m3), OEL-SWITZERLEK-LAND-TWA 1 ppm (1.4 mg/m3), OEL-THE NETHERLANDS-TWA 1 ppm (1.4 mg/m3), OEL-UNITED KINGDOM-TWA 1 ppm (1.5 mg/m3), STEL 2 ppm (3 mg/m3).

*** SECTION 16 - ADDITIONAL INFORMATION ***

Additional Information:
No additional information available.

MSDS Creation Date: 1/12/1995 Revision #1 Date: 9/2/1997

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