

Material Data Safety Sheet (MSDS): HYDROGEN PEROXIDE

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Note: This information sheet has been re-formatted for better clarity by the Department of Earth Sciences.

Some of the data such as information on shipping and weapons treaties were intentionally left out. If you want to look at the complete MSDS, you can either check one of the hardcopy versions in the Department,

contact the manufacturer, or check one of the various Web-based databases such as those compiled by BU's Office of Environmental Health & Safety (www.bu.edu/ehs/msds/index.htm).

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1. Product Identification

MSDS Name: **Hydrogen Peroxide (30% in Water) (Without Stabilizer), Reagent ACS**

Synonyms: Carbamide Peroxide, Hydrogen Dioxide, Hydroperoxide, Urea Peroxide.

Company Identification: Acros Organics N.V.

One Reagent Lane

Fairlawn, NJ 07410

For information in North America, call: 800-ACROS-01

For emergencies in the US, call CHEMTREC: 800-424-9300

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2. Composition/Information on Ingredients

CAS#	Chemical Name	%	EINECS#
7722-84-1	Hydrogen peroxide	30-50%	231-765-0
7732-18-5	Water	Balance	231-791-2

Hazard Symbols: C

Risk Phrases: 34

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3. Hazards Identification

EMERGENCY OVERVIEW

Appearance: APHA: 10 max.

Danger! Strong oxidizer. Contact with other material may cause a fire. Harmful if inhaled. Corrosive. Causes eye and skin burns. May cause severe respiratory tract irritation with possible burns. May cause severe digestive tract irritation with possible burns.

Target Organs: None known.

Potential Health Effects

Eye:

Causes eye burns. Produces irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury.

Skin:

Causes skin burns.

Ingestion:

May cause severe and permanent damage to the digestive tract. Causes gastrointestinal tract burns. May cause perforation of the digestive tract. May cause severe digestive tract irritation with abdominal pain, nausea, vomiting and diarrhea.

Inhalation:

Harmful if inhaled. May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. Causes chemical burns to the respiratory tract. May cause ulceration of nasal tissue, insomnia, nervous tremors with numb extremities, chemical pneumonia, unconsciousness, and death.

Chronic:

Prolonged or repeated skin contact may cause dermatitis.

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4. First Aid Measures

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately. Do NOT allow victim to rub or keep eyes closed. Extensive irrigation is required (at least 30 minutes).

Skin:

Get medical aid immediately. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists. Wash clothing before reuse. Destroy contaminated shoes.

Ingestion:

Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately. Call a poison control center.

Inhalation:

Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. DO NOT use mouth-to-mouth respiration.

Notes to Physician:

Treat symptomatically and supportively.

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5. Fire Fighting Measures

General Information:

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Oxidizer. Greatly increases the burning rate of combustible materials. Containers may explode in the heat of a fire. Some oxidizers may react explosively with hydrocarbons(fuel).

Extinguishing Media:

Do NOT get water inside containers. Cool containers with flooding quantities of water until well after fire is out. For small fires DO NOT use dry chemicals, carbon dioxide, halon or foams. USE WATER ONLY. For large fires flood fire with water from a distance.

Autoignition Temperature: Not available.

Flash Point: Not available.

NFPA Rating: Not published.

Explosion Limits, Lower: N/A

Upper: N/A

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6. Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Clean up spills immediately, observing precautions in the Protective Equipment section. Flush spill area with water. Provide ventilation.

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7. Handling and Storage

Handling:

Keep container tightly closed. Do not get on skin or in eyes. Do not ingest or inhale. Use with adequate ventilation. Do not store near combustible materials. Discard contaminated shoes.

Storage:

Keep container closed when not in use. Store in a cool, dry, well-ventilated area away from incompatible substances. Corrosives area. Refrigerator (approx 4°C). Do not get water inside containers.

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8. Exposure Controls/Personal Protection

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Hydrogen peroxide	1 ppm ; 1.4 mg/m3	1 ppm TWA; 1.4 mg/m3 TWA; 75 ppm IDLH	1 ppm TWA; 1.4 mg/m3 TWA

OSHA Vacated PELs:

Hydrogen peroxide: 1 ppm TWA; 1.4 mg/m3 TWA

Personal Protective Equipment

Eyes:

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

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9. Physical and Chemical Properties (Hydrogen Peroxide)

Appearance:	Liquid
Odor:	Odorless
Solubility:	Miscible
Density:	1.2000g/cm ³
pH:	Slightly acidic
% Volatiles by volume @ 21C (70F):	Not available
Boiling Point:	114 deg C
Melting Point:	-50 deg C
Vapor Density (Air=1):	Not available
Vapor Pressure (mm Hg):	1 mbar @ 30 deg C
Evaporation Rate (Butyl Acetate=1):	Not available
Viscosity:	1.245cP

Molecular Formula: H₂O₂
Molecular Weight: 34.00

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10. Stability and Reactivity

Chemical Stability: Decomposes slowly to release oxygen.

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

Incompatibilities with Other Materials: Acids, bases, brass, copper, bronze, chromium trioxide, iron, lead, silver, zinc.

Hazardous Decomposition Products: Irritating and toxic fumes and gases, oxygen, hydrogen gas.

Hazardous Polymerization: Has not been reported

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11. Toxicological Information

RTECS#:

CAS# 7722-84-1: MX0899000 MX0900000

CAS# 7732-18-5: ZC0110000

LD50/LC50:

CAS# 7722-84-1: Inhalation, rat: LC50 =2 gm/m³/4H; Oral, mouse: LD50 = 2 gm/kg; Skin, rat: LD50 =

4060 mg/kg.

CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg.

Carcinogenicity:

Hydrogen peroxide -

ACGIH: A3 - Animal Carcinogen

IARC: Group 3 carcinogen

Epidemiology:

No information available.

Teratogenicity:

No information available.

Reproductive Effects:

No information available.

Neurotoxicity:

No information available.

Mutagenicity:

No information available.

Other Studies:

No data available.

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12. Ecological Information

Ecotoxicity:

Not available.

Environmental Fate:

Not available.

Physical/Chemical:

Not available.

Other:

Not available.

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13. Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

RCRA D-Series Maximum Concentration of Contaminants: None listed.

RCRA D-Series Chronic Toxicity Reference Levels: None listed.

RCRA F-Series: None listed.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

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16. Other Information

MSDS Creation Date: 2/07/1996 Revision #5 Date: 1/23/1998

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.

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