



## Material Safety Data Sheet Hydrogen Peroxide, 30% - 50% w/w

### Section 1 - Chemical Product and Company Identification

**MSDS Name:**

Hydrogen Peroxide, 30% - 50% w/w

**Catalog Numbers:**

LC15430

**Synonyms:**

Hydrogen dioxide solution, peroxide

**Company Identification:**

LabChem Inc

200 William Pitt Way

Pittsburgh, PA 15238

**Company Phone Number:**

(412) 826-5230

**Emergency Phone Number:**

(800) 424-9300

**CHEMTREC Phone Number:**

(800) 424-9300

### Section 2 – Composition, Information on Ingredients

CAS#	Chemical Name:	Percent
7732-18-5	Water	balance
7722-84-1	Hydrogen peroxide	30 -50

### Section 3 - Hazards Identification

#### Emergency Overview

**Appearance:** *Clear, colorless solution*

**Danger!** Strong oxidizer. Contact with other material may cause a fire. Corrosive. Light sensitive. May be harmful if swallowed. May cause central nervous system effects. Eye contact may result in permanent eye damage. May cause blood abnormalities. May cause severe respiratory tract irritation with possible burns. Causes eye and skin irritation and possible burns. May cause severe digestive tract irritation with possible burns.

**Target Organs:** *Blood, central nervous system.*

#### Potential Health Effects

**Eye:**

Contact with liquid causes severe burns and may cause corneal damage.

**Skin:**

Causes severe skin irritation and possible burns. May cause discoloration, erythema (redness), swelling, and the formation of papules and vesicles (blisters).



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**Ingestion:**

Causes gastrointestinal irritation with nausea, vomiting and diarrhea. Causes gastrointestinal tract burns. May cause vascular collapse and damage. May cause damage to the red blood cells. May cause difficulty in swallowing, stomach distension, possible cerebral swelling and death. Ingestion may result in irritation of the esophagus, bleeding of the stomach and ulcer formation.

**Inhalation:**

Causes chemical burns to the respiratory tract. May cause ulceration of nasal tissue, insomnia, nervous tremors with numb extremities, chemical pneumonia, unconsciousness, and death. At high concentrations, respiratory effects may include acute lung damage and delayed pulmonary edema.

**Chronic:**

Prolonged or repeated skin contact may cause dermatitis. Laboratory experiments have resulted in mutagenic effects. Repeated contact may cause corneal damage.

### Section 4 - First Aid Measures

**Eyes:**

Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).

**Skin:**

Immediately flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid at once.

**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.

**Inhalation:**

Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

**Notes to Physician:**

Treat symptomatically and supportively. Attempts at evacuating the stomach via emesis induction or gastric lavage should be avoided. In the event of severe distension of the stomach or esophagus due to gas formation, insertion of a gastric tube may be required. To treat corneal damage, careful ophthalmologic evaluation is recommended and the possibility of local corticosteroid therapy should be considered.

### Section 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. Water runoff can cause environmental damage. Dike and collect water used to fight fire. Strong oxidizer. Contact with other material may cause fire. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Substance is noncombustible. Use water with caution and in flooding amounts. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Some oxidizers may react explosively with hydrocarbons (fuel). May decompose explosively when heated or involved in a fire. May accelerate burning if involved in a fire.



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**Extinguishing Media:**

Use water only!

**Autoignition Temperature:**

No information found.

**Flash Point:**

No information found.

**NFPA Rating:**

CAS# 7732-18-5: Health-0, Flammability- 0, Instability- 0.

CAS# 7722-84-1: Not published.

**Explosion Limits:**

Lower: 40      Upper: 100

### Section 6 - Accidental Release Measures

**General Information:**

Use proper personal protective equipment as indicated in Section 8.

**Spills/Leaks:**

Absorb spills with absorbent (vermiculite, sand, fuller's earth) and place in plastic bags for later disposal. Wash down with water if necessary. Remove all ignition sources and heat, and ventilate the area. Scoop into glass or plastic container, and label "OXIDIZER" for disposal. Do not allow liquid or gases to accumulate in sewers or drains.

### Section 7 - Handling and Storage

**Handling:**

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use only in a well-ventilated area. Contents may develop pressure upon prolonged storage. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Avoid contact with clothing and other combustible materials. Do not ingest or inhale. Store protected from light. Discard contaminated shoes. Unused chemicals should not be returned to the container. Rinse empty drums and containers thoroughly with water before discarding.

**Storage:**

Keep away from heat, sparks, and flame. Do not store near combustible materials. Keep container closed when not in use. Store protected from light. Keep away from alkalis, oxidizable materials, finely divided metals, alcohols, and permanganates. Store only in light-resistant containers fitted with a safety vent.

### Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:**

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.



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### Exposure Limits:

Chemical Name:	ACGIH	NIOSH	OSHA
Water	None of the components are on this list.	None of the components are on this list.	None of the components are on this list.
Hydrogen peroxide	1 ppm TWA	1 ppm TWA; 1.4 mg/m <sup>3</sup> TWA; 75 ppm IDLH	1 ppm TWA; 1.4 mg/m <sup>3</sup> TWA

### OSHA Vacated PELs:

Hydrogen peroxide: 1 ppm TWA; 1.4 mg/m<sup>3</sup> 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 29 CFR 1910.134 or European Standard EN 149.

Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

## Section 9 - Physical and Chemical Properties

<b>Physical State:</b>	Clear liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Slight acid odor
<b>pH:</b>	3.3 (30% solution)
<b>Vapor Pressure:</b>	23 mm Hg @ 30C
<b>Vapor Density:</b>	1.10
<b>Evaporation Rate:</b>	>1.0 (Butyl acetate = 1)
<b>Viscosity:</b>	1.25 cP
<b>Boiling Point:</b>	226°F (108°C)
<b>Freezing/Melting Point:</b>	-27°F (-33°C)
<b>Decomposition Temperature:</b>	No information found.
<b>Solubility in water:</b>	Soluble.
<b>Specific Gravity/Density:</b>	1.1-1.2
<b>Molecular Formula:</b>	H <sub>2</sub> O <sub>2</sub>
<b>Molecular Weight:</b>	34.01

## Section 10 - Stability and Reactivity

### Chemical Stability:

Decomposes slowly to release oxygen. Unstable when heated or contaminated with heavy metals, reducing agents, rust, dirt or organic materials. Stability is reduced when pH is above 4.0.

### Conditions to Avoid:

Incompatible materials, mechanical shock, light, ignition sources, excess heat, pH >1.0.



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### Incompatibilities with Other Materials:

Strong oxidizing agents, strong reducing agents, acids, acetic anhydride, alcohols, metals, selenide, manganese dioxide, mercurous chloride, rust, ketones, carboxylic acids, glycerine, sodium fluoride, sodium pyrophosphate, soluble fuels (acetone, ethanol, glycerol), wood, asbestos, hexavalent chromium compounds, salts of iron, copper, chromium, vanadium, tungsten, molybdenum, and platinum.

### Hazardous Decomposition Products:

Oxygen, hydrogen.

### Hazardous Polymerization:

Has not been reported.

## Section 11 - Toxicological Information

### RTECS:

CAS# 7732-18-5: ZC0110000.

CAS# 7722-84-1: MX0887000, MX0888000, MX0890000, MX0899000, MX0899500, MX0900000.

### LD50/LC50:

CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/kg.

CAS# 7722-84-1:

Inhalation, rat: LC50 = 2 gm/m<sup>3</sup>/4H

Oral, mouse: LD50 = 2000 mg/kg

Skin, rat: LD50 = 3000 mg/kg.

### Carcinogenicity:

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NIOSH, NTP, OSHA, or CA Prop 65.

CAS# 7722-84-1: ACGIH: A3 - Animal Carcinogen, IARC: Group 3

### Epidemiology:

No information found

### Teratogenicity:

No information found

### Reproductive:

No information found

### Mutagenicity:

No information found

### Neurotoxicity:

No information found

## Section 12 - Ecological Information

No information found

## Section 13 - Disposal Considerations

Dispose of in accordance with Federal, State, and local regulations.



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### Section 14 - Transport Information

#### US DOT

**Shipping Name:** Hydrogen peroxide, aqueous solution  
**Hazard Class:** 5.1  
**UN Number:** UN2014  
**Packing Group:** PG II

### Section 15 - Regulatory Information

#### US Federal

##### TSCA:

CAS# 7732-18-5 is listed on the TSCA Inventory.  
CAS# 7722-84-1 is listed on the TSCA Inventory.

##### SARA Reportable Quantities (RQ):

None of the components are on this list.

##### CERCLA/SARA Section 313:

None of the components are on this list.

##### OSHA - Highly Hazardous:

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

#### US State

##### State Right to Know:

Hydrogen peroxide can be found on the following state Right-to-Know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

##### California Regulations:

None.

#### European/International Regulations

##### Canadian DSL/NDSL:

CAS# 7732-18-5 is listed on Canada's DSL List.  
CAS# 7722-84-1 is listed on Canada's DSL List.

##### Canada Ingredient Disclosure List:

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.  
CAS# 7722-84-1 is listed on Canada's Ingredient Disclosure List.

### Section 16 - Other Information

MSDS Creation Date: November 30, 1998

Revision Date: March 31, 2010

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