

## SAFETY DATA SHEET

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1 Product identifiers

Product name: Hydrogen Peroxide 32%  
CAS number: 7722-84-1  
Synonyms: Hydrogen Peroxide (H<sub>2</sub>O<sub>2</sub>)

#### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified Uses: Industrial bleaching, processing, pollution abatement and general oxidation reactions.  
Use as recommended by the label.

#### 1.3 Details of the supplier of the safety data sheet

Company : Lab Alley, LLC  
22111 Highway 71 West, Suite 601  
Spicewood, Texas 78669  
U.S.A.

Telephone : 512-668-9918  
Fax : 512-886-4008

#### 1.4 Emergency telephone

Emergency Phone # : US & Canada: 1-800-535-5053      INFOTRAC  
International 1-352-323-3500      INFOTRAC

### SECTION 2: Hazards identification

#### 2.1 Classification of the substance or mixture

##### GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Oxidizing liquids (Category 2)  
Acute toxicity, oral (Category 4)  
Serious eye damage/eye irritation (Category 1)

## 2.2 GHS Label elements, including precautionary statements

Pictogram:



Signal Word:

**Danger**

Hazard statement(s):

May intensify fire; oxidizer. Harmful if swallowed. Causes serious eye damage.

Precautionary statement(s):

**Prevention** - Wash face, hands and any exposed skin thoroughly after handling. Wear protective gloves/ protective clothing/ eye protection/ face protection. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Keep/Store away from clothing/flammable materials/combustibles. Take any precaution to avoid mixing with combustibles/flammables. **Response** - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor. IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Get medical attention if symptoms occur. IF ON SKIN OR CLOTHING: Wash with plenty of water. Take off contaminated clothing and wash before reuse. If skin irritation occurs: Get medical advice/attention.

### Hazards not otherwise classified

No hazards not otherwise classified were identified.

## SECTION 3: Composition/information on ingredients

### 3.1 Components

Chemical name	CAS-No	Weight %
Hydrogen peroxide	7722-84-1	32
Water	7732-18-5	68

## SECTION 4: First aid measures

### 4.1 Description of first-aid measures

**General advice:**

Take off all contaminated clothing immediately. Contact with combustible material may cause fire. If you feel unwell seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance. Wash contaminated clothing before reuse.

**If inhaled:**

Move to fresh air. If person is not breathing, contact emergency medical services, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for further treatment advice.

<b>In case of skin contact:</b>	Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for further treatment advice.
<b>In case of eye contact:</b>	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Seek immediate medical attention/advice.
<b>In case of ingestion:</b>	Rinse mouth. Do not induce vomiting. If conscious, give 2 glasses of water. Get immediate medical attention. Never give anything by mouth to an unconscious person.

## 4.2 Most important symptoms and effects, both acute and delayed

Hydrogen Peroxide irritates respiratory system and, if inhaled, may cause inflammation and pulmonary edema. The effects may not be immediate. Overexposure symptoms are coughing, giddiness and sore throat. In case of accidental ingestion, necrosis may result from mucous membrane burns (mouth, esophagus and stomach). Oxygen rapid release may cause stomach swelling and hemorrhaging, which may produce major, or even fatal, injury to organs if a large amount has been ingested.

## 4.3 Indication of any immediate medical attention and special treatment needed

Hydrogen peroxide at these concentrations is a strong oxidant. Direct contact with the eye is likely to cause corneal damage especially if not washed immediately. Careful ophthalmologic evaluation is recommended and the possibility of local corticosteroid therapy should be considered. Because of the likelihood of corrosive effects on the gastrointestinal tract after ingestion, and the unlikelihood of systemic effects, attempts at evacuating the stomach via emesis induction or gastric lavage should be avoided. There is a remote possibility, however, that a nasogastric or orogastric tube may be required for the reduction of severe distension due to gas formation.

# SECTION 5: Firefighting measures

## 5.1 Extinguishing media

**Suitable (and unsuitable) extinguishing media** Water. Do not use any other substance.

## 5.2 Specific hazards arising from the substance or mixture

In closed unventilated containers, risk of rupture due to the increased pressure from decomposition. Contact with combustible material may cause fire.

## 5.3 Special protective equipment and precautions for firefighters

Use water spray to cool fire exposed surfaces and protect personnel. Move containers from fire area if you can do it without risk. As in any fire, wear self-contained breathing apparatus and full protective gear.

## 5.4 Further information

On decomposition, product releases oxygen, which may intensify fire.

# SECTION 6: Accidental release measures

## 6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes, clothing. Wear personal protective equipment. Isolate and post spill area. Keep people away from and upwind of spill/leak. Eliminate all sources of ignition and remove combustible materials. Combustible materials exposed to hydrogen peroxide should be immediately submerged in or rinsed with large amounts of water to ensure that all hydrogen peroxide is removed. Residual hydrogen peroxide that is allowed to dry (upon evaporation hydrogen peroxide can concentrate) on organic materials such as paper, fabrics, cotton, leather, wood or other combustibles can cause the material to ignite and result in fire.

## 6.2 Environmental precautions

Prevent undiluted spillage from entering sewers, basements or watercourses.

## 6.3 Methods and materials for containment and cleaning up

Dike to collect large liquid spills. Stop leak and contain spill if this can be done safely. Small spillage: Dilute with large quantities of water. Flush area with flooding quantities of water. Hydrogen peroxide may be decomposed by adding sodium metabisulfite or sodium sulfite after diluting to about 5%.

## 6.4 Reference to other sections

For disposal see section 13.

# SECTION 7: Handling and storage

## 7.1 Precautions for safe handling

Keep/Store away from clothing/ combustible materials. Wear personal protective equipment. Reference to other sections. Never return unused hydrogen peroxide to original container. Contamination may cause decomposition and generation of oxygen gas which could result in high pressures and possible container rupture. Empty drums should be triple rinsed with water before discarding. Utensils used for handling hydrogen peroxide should only be made of glass, stainless steel, aluminum or plastic. Pipes and equipment should be passivated before first use. Use only in well-ventilated areas. Hydrogen peroxide should be stored only in vented containers and transferred only in a prescribed manner.

### Hygiene measures

Avoid breathing vapors, mist or gas. Clean water should be available for washing in case of eye or skin contamination.

## 7.2 Conditions for safe storage, including any incompatibilities

### Storage conditions

Keep containers in cool areas out of direct sunlight and away from combustibles. Provide mechanical general and/or local exhaust ventilation to prevent release of vapor or mist into work environment. Containers must be vented. Keep/store only in original container. Store rooms or warehouses should be made of non-combustible materials with impermeable floors. In case of release, spillage should flow to safe area. Containers should be visually inspected on a regular basis to detect any abnormalities (swollen drums, increases in temperature, etc.).

# SECTION 8. Exposure controls/personal protection

## 8.1 Occupational exposure limits

### Control parameters

#### Exposure Guidelines

Ingredients with workplace control parameters.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
Hydrogen peroxide 7722-84-1	TWA: 1 ppm	TWA: 1 ppm TWA: 1.4 mg/m <sup>3</sup>	IDLH: 75 ppm TWA: 1 ppm TWA: 1.4 mg/m <sup>3</sup>	Mexico: TWA 1 ppm Mexico: TWA 1.5 mg/m <sup>3</sup> Mexico: STEL 2 ppm Mexico: STEL 3 mg/m <sup>3</sup>
Chemical name	British Columbia	Quebec	Ontario TWAEV	Alberta
Hydrogen peroxide 7722-84-1	TWA: 1 ppm	TWA: 1 ppm TWA: 1.4 mg/m <sup>3</sup>	TWA: 1 ppm	TWA: 1 ppm TWA: 1.4 mg/m <sup>3</sup>

## 8.2 Exposure controls

### Appropriate engineering controls

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation.

### Personal protective equipment

#### Eye/face protection

Use chemical splash-type monogoggles and a full-face shield made of polycarbonate, acetate, polycarbonate/acetate, PETG or thermoplastic.

#### Skin and body protection

For body protection wear impervious clothing such as an approved splash protective suit made of SBR rubber, PVC (PVC Outershell w/Polyester Substrate), Gore-Tex (Polyester trilaminate w/Gore-Tex), or a specialized HAZMAT Splash or Protective Suite (Level A, B, or C). For foot protection, wear approved boots made of NBR, PVC, Polyurethane, or neoprene. Overboots made of Latex or PVC, as well as firefighter boots or specialized HAZMAT boots are also permitted. DO NOT wear any form of boot or overboot made of nylon or nylon blends. DO NOT USE cotton, wool or leather as these materials react rapidly with higher concentrations of hydrogen peroxide. Completely submerge hydrogen peroxide contaminated clothing or other materials in water prior to drying. Residual hydrogen peroxide, if allowed to dry on materials such as paper, fabrics, cotton, leather, wood or other combustibles, can cause the material to ignite and result in a fire.

#### Respiratory protection

If concentrations in excess of 10 ppm are expected, use NIOSH/DHHS approved self-contained breathing apparatus (SCBA) or other approved air-supplied respirator (ASR) equipment (e.g., a full-face airline respirator (ALR)). DO NOT use any form of air-purifying respirator (APR) or filtering facepiece (dust mask), especially those containing oxidizable sorbants such as activated carbon.

### Control of environmental exposure

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation.

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

<b>Physical State</b>	Liquid.
<b>Appearance</b>	Clear, Colorless.
<b>Odor</b>	Odorless.
<b>Odor Thresh</b>	Not applicable.
<b>pH</b>	<= 3.7
<b>Melting Point/Range</b>	-29 °C / -20 °F
<b>Boiling Point/Range</b>	107 °C / 224.6 °F estimated
<b>Flash Point</b>	Not flammable.
<b>Evaporation Rate</b>	> 1 (n-butyl acetate=1)
<b>Flammability (solid, gas)</b>	Not flammable.
<b>Flammability or explosive limit</b>	Not applicable.
<b>Upper</b>	: NA
<b>Lower</b>	: NA

<b>Vapor Pressure</b>	24 mm Hg @ 30 °C
<b>Vapor Density</b>	No data available.
<b>Density</b>	1.12 g/cm <sup>3</sup> @ 20°C
<b>Solubility</b>	Completely soluble.
<b>Partition coefficient; n-octanol/water</b>	log Kow = -1.5 @ 20 °C
<b>Autoignition Temp</b>	Not combustible.
<b>Decomposition Temp</b>	100 °C / 212 °F
<b>Viscosity</b>	No data available.
<b>Molecular Formula</b>	H <sub>2</sub> O <sub>2</sub>
<b>Molecular Weight</b>	34
<b>VOC Content(%)</b>	No data available.
<b>Oxidizing properties</b>	Strong oxidizer.

## 9.2 Other safety information

None.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Reactive and oxidizing agent.

### 10.2 Chemical stability

Stable under normal conditions. Decomposes on heating. Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Contact with organic substances may cause fire or explosion. Contact with metals, metallic ions, alkalis, reducing agents and organic matter (such as alcohols or terpenes) may produce self-accelerated thermal decomposition. Hazardous polymerization does not occur.

### 10.4 Conditions to avoid

Excessive heat; Contamination; Exposure to UV-rays; pH variations.

### 10.5 Incompatible materials

Combustible materials. Copper alloys, galvanized iron. Strong reducing agents. Heavy metals. Iron. Copper alloys. Contact with metals, metallic ions, alkalis, reducing agents and organic matter (such as alcohols or terpenes) may produce self-accelerated thermal decomposition

### 10.6 Hazardous decomposition products

Oxygen which supports combustion. Liable to produce overpressure in container.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Product Information

LD50 Oral	50% solution: LD50 > 225 mg/kg bw (rat) 35 % solution: LD50 1193 mg/kg bw (rat) 70 % solution: LD50 1026 mg/kg bw (rat)
LD50 Dermal	35% solution: LD50 > 2000 mg/kg bw (rabbit) 70 % solution: LD50 9200 mg/kg bw (rabbit)
LC50 Inhalation	50% solution: LC50 > 170 mg/m <sup>3</sup> (rat) (4-hr) Hydrogen Peroxide vapors: LC0 9400 mg/m <sup>3</sup> (mouse) (5 - 15 minutes) Hydrogen Peroxide vapors: LC50 > 2160 mg/m <sup>3</sup> (mouse)

#### Skin corrosion/irritation

Moderately irritating (rabbit).

#### Serious eye damage/eye irritation

Corrosive. Severely irritating to the eyes.

#### Respiratory or skin sensitization

Did not cause sensitization on laboratory animals.

#### Germ cell mutagenicity

This product is not recognized as mutagenic by Research Agencies. In vivo tests did not show mutagenic effects.

#### Carcinogenicity

This product contains hydrogen peroxide. The International Agency for Research on Cancer (IARC) has concluded that there is inadequate evidence for carcinogenicity of hydrogen peroxide in humans, but limited evidence in experimental animals (Group 3 - not classifiable as to its carcinogenicity to humans). The American Conference of Governmental Industrial Hygienists (ACGIH) has concluded that hydrogen peroxide is a 'Confirmed Animal Carcinogen with Unknown Relevance to Humans' (A3).

Chemical name	ACGIH	IARC	NTP	OSHA
Hydrogen peroxide 7722-84-1	A3	3		

#### Reproductive toxicity

This product is not recognized as reprotox by Research Agencies. No toxicity to reproduction in animal studies.

#### Specific target organ toxicity - single exposure

Not classified.

#### Specific target organ toxicity - repeated exposure

Not classified.

#### Aspiration hazard

No information available.

#### Chronic effects

Prolonged inhalation may be harmful.

## 11.2 Additional information

Vapors, mists, or aerosols of hydrogen peroxide can cause upper airway irritation, inflammation of the nose, hoarseness, shortness of breath, and a sensation of burning or tightness in the chest. Prolonged exposure to concentrated vapor or to dilute solutions can cause irritation and temporary bleaching of skin and hair. Exposure to vapor, mist, or aerosol can cause stinging pain and tearing of eyes.

## SECTION 12. Ecological information

### 12.1 Toxicity

#### Ecotoxicity effects

Hydrogen peroxide is naturally produced by sunlight (between 0.1 and 4 ppb in air and 0.001 to 0.1 mg/L in water). Not expected to have significant environmental effects.

Hydrogen peroxide (7722-84-1)				
Active Ingredient(s)	Duration	Species	Value	Units
Hydrogen peroxide	96 h LC50	Fish Pimephales promelas	16.4	mg/L
Hydrogen peroxide	72 h LC50	Fish Leuciscus idus	35	mg/L
Hydrogen peroxide	48 h EC50	Daphnia pulex	2.4	mg/L
Hydrogen peroxide	24 h EC50	Daphnia magna	7.7	mg/L
Hydrogen peroxide	72 h EC50	Algae Skeletonema costatum	1.38	mg/L
Hydrogen peroxide	21 d NOEC	Daphnia magna	0.63	mg/L

### 12.2 Persistence and degradability

Hydrogen peroxide in the aquatic environment is subject to various reduction or oxidation processes and decomposes into water and oxygen. Hydrogen peroxide half-life in freshwater ranged from 8 hours to 20 days, in air from 10 - 20 hours, and in soils from minutes to hours depending upon microbiological activity and metal contamination.

### 12.3 Bio accumulative potential

Material may have some potential to bioaccumulate but will likely degrade in most environments before accumulation can occur.

### 12.4 Mobility in soil

Will likely be mobile in the environment due to its water solubility but will likely degrade over time.

### 12.5 Results of PBT and vBvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

### 12.6 Endocrine disrupting properties

No data available.

### 12.7 Other adverse effects

Decomposes into oxygen and water. No adverse effects.

## SECTION 13. Disposal considerations

### 13.1 Waste Disposal Methods

Dispose of in accordance with local regulations. Can be disposed as waste water, when in compliance with local regulations. Contaminated packaging - Drums - Empty as thoroughly as possible. Triple rinse drums before disposal. Avoid contamination; impurities accelerate decomposition. Never return product to original container.



## SECTION 14: Transport information

### DOT

UN-No UN2014  
 Proper Shipping Name Hydrogen peroxide, aqueous solutions  
 Hazard Class 5.1  
 Packing Group II

### TDG

UN-No UN2014  
 Proper Shipping Name Hydrogen peroxide, aqueous solutions  
 Hazard Class 5.1  
 Packing Group II

### IMDG/IMO

UN-No UN2014  
 Proper Shipping Name Hydrogen peroxide, aqueous solutions  
 Hazard Class 5.1  
 Packing Group II

### ICAO/IATA

Air regulation permit shipment of Hydrogen Peroxide (<=40%) in non-vented containers for Air Cargo Only aircraft, as well as for Passenger and Cargo aircraft.

## SECTION 15: Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

### SARA 311/312 Hazard Categories

Acute health hazard	Yes
Chronic health hazard	No
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive Hazard	No

### Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

### CERCLA

Chemical name	Hazardous Substances RQs	Extremely Hazardous Substances RQs	SARA RQ
Hydrogen peroxide 7722-84-1		1000 lb	

Hydrogen Peroxide RQ is for concentrations of > 52% only

## International Inventories

Component	TSCA (United States)	DSL (Canada)	EINECS/EL INCS (Europe)	ENCS (Japan)	China (IECSC)	KECL (Korea)	PICCS (Philippines )	AICS (Australia)	NZIoC (New Zealand)
Hydrogen peroxide 7722-84-1 ( 35 )	X	X	X	X	X	X	X	X	X

Mexico - Grade

Serious risk, Grade 3

## CANADA

WHMIS Hazard Class

C - Oxidizing materials  
D2B - Toxic materials  
E - Corrosive material



## SECTION 16: Other information

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### Disclaimer:

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.