

# Hydrogen Peroxide, 30% w/w

## Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Date of issue: 02/17/2014

Version: 1.0

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

#### 1.1. Product identifier

Product form : Substance  
Substance name : Hydrogen Peroxide, 30% w/w  
Chemical name : hydrogen peroxide solution ... %  
CAS No : 7722-84-1  
Product code : LC15430

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

Use of the substance/mixture : For laboratory and manufacturing use only.

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

LabChem Inc  
Jackson's Pointe Commerce Park Building 1000, 1010 Jackson's Pointe Court  
Zelienople, PA 16063 - USA  
T 412-826-5230 - F 724-473-0647  
[info@labchem.com](mailto:info@labchem.com) - [www.labchem.com](http://www.labchem.com)

#### 1.4. Emergency telephone number

Emergency number : CHEMTREC: 1-800-424-9300 or 011-703-527-3887

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### GHS-US classification

Ox. Liq. 1 H271  
Acute Tox. 4 (Oral) H302  
Acute Tox. 4 (Inhalation) H332  
Skin Corr. 1A H314

#### 2.2. Label elements

##### GHS-US labelling

Hazard pictograms (GHS-US) :



GHS03

GHS05

GHS07

Signal word (GHS-US) :

Danger

Hazard statements (GHS-US) :

H271 - May cause fire or explosion; strong oxidiser  
H302+H332 - Harmful if swallowed or if inhaled  
H314 - Causes severe skin burns and eye damage

Precautionary statements (GHS-US) :

P210 - Keep away from heat, sparks, open flames, hot surfaces. - No smoking  
P220 - Keep/Store away from clothing, combustible materials  
P221 - Take any precaution to avoid mixing with combustibles  
P260 - Do not breathe mist, vapours, spray  
P264 - Wash exposed skin thoroughly after handling  
P270 - Do not eat, drink or smoke when using this product  
P271 - Use only outdoors or in a well-ventilated area  
P280 - Wear protective gloves, protective clothing, eye protection, face protection  
P283 - Wear fire/flammable resistant/retardant clothing  
P301+P330+P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting  
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
P304+P340 - IF INHALED: remove victim to fresh air and keep at rest in a position comfortable for breathing  
P305+P351+P338 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing  
P306+P360 - If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes  
P310 - Immediately call a POISON CENTER or doctor/physician

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P363 - Wash contaminated clothing before reuse  
P370+P378 - In case of fire: Use carbon dioxide (CO<sub>2</sub>), powder, alcohol-resistant foam for extinction  
P371+P380+P375 - In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion  
P405 - Store locked up  
P501 - Dispose of contents/container to comply with local, state and federal regulations

### 2.3. Other hazards

Other hazards not contributing to the classification : None under normal conditions.

### 2.4. Unknown acute toxicity (GHS-US)

No data available

## SECTION 3: Composition/information on ingredients

### 3.1. Substance

Substance type : Multi-constituent  
Name : Hydrogen Peroxide, 30% w/w  
CAS No : 7722-84-1

| Name              | Product identifier | %       | GHS-US classification                                       |
|-------------------|--------------------|---------|---|
| Water             | (CAS No) 7732-18-5 | 65 - 70 | Not classified  |
| Hydrogen Peroxide | (CAS No) 7722-84-1 | 30 - 35 | Ox. Liq. 1, H271<br>Skin Corr. 1B, H314<br>Eye Dam. 1, H318 |

Full text of H-phrases: see section 16

### 3.2. Mixture

Not applicable

## SECTION 4: First aid measures

### 4.1. Description of first aid measures

First-aid measures general : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).  
First-aid measures after inhalation : Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.  
First-aid measures after skin contact : IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes. Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor/physician.  
First-aid measures after eye contact : 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/physician.  
First-aid measures after ingestion : Rinse mouth. Do NOT induce vomiting. Call a POISON CENTER/doctor/physician if you feel unwell. Immediately call a POISON CENTER or doctor/physician.

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

Symptoms/injuries : Causes severe skin burns and eye damage.  
Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

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

Obtain medical assistance.

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

Suitable extinguishing media : Foam. Dry powder. Carbon dioxide. Water spray. Sand.  
Unsuitable extinguishing media : Do not use a heavy water stream.

### 5.2. Special hazards arising from the substance or mixture

Fire hazard : May cause fire or explosion; strong oxidiser.  
Explosion hazard : Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.  
Reactivity : Thermal decomposition generates : Corrosive vapours.

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### 5.3. Advice for firefighters

- Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire-fighting water from entering environment. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : No naked lights. No smoking.

#### 6.1.1. For non-emergency personnel

- Protective equipment : Protective goggles. Protective clothing. Gloves.
- Emergency procedures : Evacuate unnecessary personnel.

#### 6.1.2. For emergency responders

- Protective equipment : Equip cleanup crew with proper protection.
- Emergency procedures : Ventilate area.

### 6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

### 6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

## SECTION 7: Handling and storage

### 7.1. Precautions for safe handling

- Additional hazards when processed : Hazardous waste due to potential risk of explosion.
- Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour. Take any precaution to avoid mixing with Combustibles. Do not breathe mist, vapours, spray. Avoid contact during pregnancy/while nursing.
- Hygiene measures : Do not eat, drink or smoke when using this product. Wash exposed skin thoroughly after handling.

### 7.2. Conditions for safe storage, including any incompatibilities

- Technical measures : Proper grounding procedures to avoid static electricity should be followed. Comply with applicable regulations.
- Storage conditions : Keep only in the original container in a cool, well ventilated place away from : combustible materials, Heat sources, Ignition sources, incompatible materials, Direct sunlight. Keep container closed when not in use. Keep in fireproof place.
- Incompatible products : Strong bases. Strong acids. Strong reducing agents. combustible materials.
- Incompatible materials : Sources of ignition. Direct sunlight. Heat sources. combustible materials.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

| Hydrogen Peroxide, 30% w/w (7722-84-1) |                        |           |
|--|------------------------|-----------|
| USA ACGIH                              | ACGIH TWA (mg/m³)      | 1.4 mg/m³ |
| USA ACGIH                              | ACGIH TWA (ppm)        | 1 ppm     |
| USA OSHA                               | OSHA PEL (TWA) (mg/m³) | 1.4 mg/m³ |
| USA OSHA                               | OSHA PEL (TWA) (ppm)   | 1 ppm     |

### 8.2. Exposure controls

- Appropriate engineering controls : Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation.
- Personal protective equipment : Avoid all unnecessary exposure. Wear fire/flame resistant/retardant clothing.

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|                          |  |
|--------------------------|--|
| Hand protection          | : Wear protective gloves.                |
| Eye protection           | : Chemical goggles or face shield.       |
| Skin and body protection | : Wear suitable protective clothing.     |
| Respiratory protection   | : Wear appropriate mask.                 |
| Other information        | : Do not eat, drink or smoke during use. |

### SECTION 9: Physical and chemical properties

#### 9.1. Information on basic physical and chemical properties

|  |   |
|--|---|
| Physical state                             | : Liquid  |
| Colour                                     | : Colourless.   |
| Odour                                      | : characteristic.   |
| Odour threshold                            | : No data available                                       |
| pH   | : No data available                                       |
| Relative evaporation rate (butylacetate=1) | : No data available                                       |
| Melting point                              | : -0.41 °C  |
| Freezing point                             | : No data available                                       |
| Boiling point                              | : 150.2 °C  |
| Flash point                                | : No data available                                       |
| Self ignition temperature                  | : No data available                                       |
| Decomposition temperature                  | : No data available                                       |
| Flammability (solid, gas)                  | : No data available                                       |
| Vapour pressure                            | : No data available                                       |
| Relative vapour density at 20 °C           | : No data available                                       |
| Relative density                           | : No data available                                       |
| Density                                    | : 1.41 g/cm³  |
| Solubility                                 | : Soluble in water. Soluble in ether. Soluble in ethanol. |
| Log Pow                                    | : No data available                                       |
| Log Kow                                    | : No data available                                       |
| Viscosity, kinematic                       | : No data available                                       |
| Viscosity, dynamic                         | : No data available                                       |
| Explosive properties                       | : No data available                                       |
| Oxidising properties                       | : May cause fire or explosion; strong oxidiser.           |
| Explosive limits                           | : No data available                                       |

#### 9.2. Other information

No additional information available

### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

Thermal decomposition generates : Corrosive vapours.

#### 10.2. Chemical stability

Unstable on exposure to light. May cause fire or explosion; strong oxidiser.

#### 10.3. Possibility of hazardous reactions

Not established.

#### 10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Heat. Sparks. Overheating. Open flame.

#### 10.5. Incompatible materials

Strong acids. Strong bases. combustible materials. Strong reducing agents.

#### 10.6. Hazardous decomposition products

oxygen. Thermal decomposition generates : Corrosive vapours.

### SECTION 11: Toxicological information

#### 11.1. Information on toxicological effects

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Acute toxicity : Harmful if swallowed. Harmful if inhaled.

### Hydrogen Peroxide, 30% w/w ( 1f )7722-84-1

|                 |                          |
|-----------------|--------------------------|
| ATE (oral)      | 500.000 mg/kg bodyweight |
| ATE (gases)     | 4500.000 ppmV/4h         |
| ATE (vapours)   | 11.000 mg/l/4h           |
| ATE (dust,mist) | 1.500 mg/l/4h            |

### Water (7732-18-5)

|               |               |
|---------------|---------------|
| LD50 oral rat | ≥ 90000 mg/kg |
|---------------|---------------|

Skin corrosion/irritation : Causes severe skin burns and eye damage.

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

### Hydrogen Peroxide, 30% w/w (7722-84-1)

|            |                      |
|------------|----------------------|
| IARC group | 3 - Not classifiable |
|------------|----------------------|

Reproductive toxicity : Not classified

Specific target organ toxicity (single exposure) : Not classified

Specific target organ toxicity (repeated exposure) : Not classified

Aspiration hazard : Not classified

Potential Adverse human health effects and symptoms : Based on available data, the classification criteria are not met. Harmful if swallowed.

Symptoms/injuries after ingestion : Swallowing a small quantity of this material will result in serious health hazard.

Likely routes of exposure : Skin and eye contact;Inhalation

## SECTION 12: Ecological information

### 12.1. Toxicity

No additional information available

### 12.2. Persistence and degradability

#### Hydrogen Peroxide, 30% w/w (7722-84-1)

|                               |                  |
|-------------------------------|------------------|
| Persistence and degradability | Not established. |
|-------------------------------|------------------|

#### Water (7732-18-5)

|                               |                  |
|-------------------------------|------------------|
| Persistence and degradability | Not established. |
|-------------------------------|------------------|

### 12.3. Bioaccumulative potential

#### Hydrogen Peroxide, 30% w/w (7722-84-1)

|                           |                  |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |
|---------------------------|------------------|

#### Water (7732-18-5)

|                           |                  |
|---------------------------|------------------|
| Bioaccumulative potential | Not established. |
|---------------------------|------------------|

### 12.4. Mobility in soil

No additional information available

### 12.5. Other adverse effects

Other information : Avoid release to the environment.

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to comply with local, state and federal regulations.

Additional information : Hazardous waste due to potential risk of explosion.

Ecology - waste materials : Avoid release to the environment.

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### SECTION 14: Transport information

In accordance with DOT

|   |   |
|---|---|
| Transport document description                    | : UN2014 Hydrogen peroxide, aqueous solutions (with not less than 20 percent but not more than 40 percent hydrogen peroxide (stabilized as necessary)), 5.1, II |
| UN-No.(DOT)                                       | : 2014  |
| DOT NA no.  | : UN2014  |
| DOT Proper Shipping Name                          | : Hydrogen peroxide, aqueous solutions<br>with not less than 20 percent but not more than 40 percent hydrogen peroxide (stabilized as necessary)                |
| Department of Transportation (DOT) Hazard Classes | : 5.1 - Class 5.1 - Oxidizer 49 CFR 173.128   |
| Hazard labels (DOT)                               | : 5.1 - Oxidiser<br>8 - Corrosive   |



|  |   |
|--|---|
| Packing group (DOT)  | : II - Medium Danger  |
| DOT Special Provisions (49 CFR 172.102)                          | : A2 - Single packagings are not permitted on aircraft.<br>A3 - For combination packagings, if glass inner packagings (including ampoules) are used, they must be packed with absorbent material in tightly closed metal receptacles before packing in outer packagings.<br>A6 - For combination packagings, if plastic inner packagings are used, they must be packed in tightly closed metal receptacles before packing in outer packagings.<br>B53 - Packagings must be made of either aluminum or steel.<br>IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized.<br>IP5 - IBCs must have a device to allow venting. The inlet to the venting device must be located in the vapor space of the IBC under maximum filling conditions.<br>T7 - 4 178.274(d)(2) Normal..... 178.275(d)(3)<br>TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively.<br>TP6 - The tank must be equipped with a pressure release device which prevent a tank from bursting under fire engulfment conditions (the conditions prescribed in CGA pamphlet S1.2 (see 171.7 of this subchapter) or alternative conditions approved by the Associate Administrator may be used to consider the fire engulfment condition), taking into account the properties of the hazardous material to be transported.<br>TP24 - The portable tank may be fitted with a device to prevent the build up of excess pressure due to the slow decomposition of the hazardous material being transported. The device must be in the vapor space when the tank is filled under maximum filling conditions. This device must also prevent an unacceptable amount of leakage of liquid in the case of overturning.<br>TP37 - IM portable tanks are only authorized for the shipment of hydrogen peroxide solutions in water containing 72% or less hydrogen peroxide by weight. Pressure relief devices shall be designed to prevent the entry of foreign matter, the leakage of liquid and the development of any dangerous excess pressure. In addition, the portable tank must be designed so that internal surfaces may be effectively cleaned and passivated. Each tank must be equipped with pressure relief devices conforming to the following requirements: Total Concentration of hydrogen per peroxide solution \1\ 52% or less 11 Over 52%, but not greater than 60%22 Over 60%, but not greater than 72%32 \1\ Total venting capacity in standard cubic feet hour (S.C.F.H.) per pound of hydrogen peroxide solution. |
| DOT Packaging Exceptions (49 CFR 173.xxx)                        | : None  |
| DOT Packaging Non Bulk (49 CFR 173.xxx)                          | : 202   |
| DOT Packaging Bulk (49 CFR 173.xxx)                              | : 243   |
| DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27) | : 1 L   |
| DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)     | : 5 L   |

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|                             |   |
|-----------------------------|---|
| DOT Vessel Stowage Location | : D - The material must be stowed "on deck only" on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers or one passenger per each 3 m of overall vessel length, but the material is prohibited on passenger vessels in which the limiting number of passengers is exceeded. |
| DOT Vessel Stowage Other    | : 25 - Shade from radiant heat, 66 - Stow "separated from" flammable solids, 75 - Stow "separated from" permanganates   |

### Additional information

Other information : No supplementary information available.

### ADR

Transport document description :

### Transport by sea

No additional information available

### Air transport

No additional information available

## SECTION 15: Regulatory information

### 15.1. US Federal regulations

#### Hydrogen Peroxide, 30% w/w (7722-84-1)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

|                                     |  |
|-------------------------------------|--|
| SARA Section 311/312 Hazard Classes | Reactive hazard<br>Immediate (acute) health hazard |
|-------------------------------------|--|

#### Water (7732-18-5)

Listed on the United States TSCA (Toxic Substances Control Act) inventory

### 15.2. International regulations

#### CANADA

#### Hydrogen Peroxide, 30% w/w (7722-84-1)

|                      |   |
|----------------------|---|
| WHMIS Classification | Class C - Oxidizing Material<br>Class D Division 1 Subdivision B - Toxic material causing immediate and serious toxic effects<br>Class E - Corrosive Material |
|----------------------|---|

#### Water (7732-18-5)

Listed on the Canadian DSL (Domestic Substances List) inventory.

|                      |   |
|----------------------|---|
| WHMIS Classification | Uncontrolled product according to WHMIS classification criteria |
|----------------------|---|

### EU-Regulations

No additional information available

### Classification according to Regulation (EC) No. 1272/2008 [CLP]

|                           |      |
|---------------------------|------|
| Ox. Liq. 1                | H271 |
| Acute Tox. 4 (Inhalation) | H332 |
| Acute Tox. 4 (Oral)       | H302 |
| Skin Corr. 1A             | H314 |

Full text of H-phrases: see section 16

### Classification according to Directive 67/548/EEC or 1999/45/EC

R5  
O; R8  
C; R35  
Xn; R20/22

Full text of R-phrases: see section 16

### 15.2.2. National regulations

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### Water (7732-18-5)

Not listed on the Canadian Ingredient Disclosure List

### 15.3. US State regulations

No additional information available

## SECTION 16: Other information

Other information : None.

Full text of H-phrases: see section 16:

|                           |   |
|---------------------------|---|
| Acute Tox. 4 (Inhalation) | Acute toxicity (inhal.), Category 4           |
| Acute Tox. 4 (Oral)       | Acute toxicity (oral), Category 4             |
| Eye Dam. 1                | Serious eye damage/eye irritation, Category 1 |
| Ox. Liq. 1                | Oxidising Liquids, Category 1                 |
| Skin Corr. 1A             | Skin corrosion/irritation, Category 1A        |
| Skin Corr. 1B             | Skin corrosion/irritation, Category 1B        |
| H271                      | May cause fire or explosion; strong oxidiser  |
| H302                      | Harmful if swallowed                          |
| H314                      | Causes severe skin burns and eye damage       |
| H318                      | Causes serious eye damage                     |
| H332                      | Harmful if inhaled                            |

NFPA health hazard

: 3 - Short exposure could cause serious temporary or residual injury even though prompt medical attention was given.

NFPA fire hazard

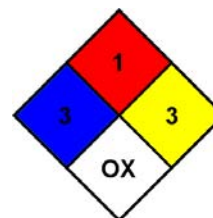
: 1 - Must be preheated before ignition can occur.

NFPA reactivity

: 3 - Capable of detonation or explosive reaction, but requires a strong initiating source or must be heated under confinement before initiation, or reacts explosively with water.

NFPA specific hazard

: OX - This denotes an oxidizer, a chemical which can greatly increase the rate of combustion/fire.



### HMIS III Rating

Health : 3 Serious Hazard - Major injury likely unless prompt action is taken and medical treatment is given

Flammability : 1 Slight Hazard

Physical : 3 Serious Hazard

Personal Protection : H

SDS US (GHS HazCom 2012)

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