

## 1 Identification

- **Product identifier**
- **Trade name:** Hydrogen Peroxide, ACS
- **Article number:** 194057
- **CAS Number:** 7722-84-1
- **Molecular Formula** H<sub>2</sub> O<sub>2</sub>
- **Molecular Weight** 34.01 g/mol
- **Application of the substance / the mixture** For Research Use Only
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
MP Biomedicals, LLC  
29525 Fountain Parkway  
Solon, OH 44139  
United States  
www.mpbio.com
- **Information department:** Quality Control Department
- **Emergency telephone number:** CHEMTREC: 1-800-424-9300 (1-703-527-3887)

## 2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS03 Flame over circle

Ox. Liq. 1 H271 May cause fire or explosion; strong oxidizer.



GHS05 Corrosion

Skin Corr. 1A H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

- **Label elements**

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS03



GHS05



GHS07

- **Signal word** Danger

- **Hazard-determining components of labeling:**

hydrogen peroxide

- **Hazard statements**

May cause fire or explosion; strong oxidizer.

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/13/2017

Reviewed on 09/13/2017

**Trade name: Hydrogen Peroxide, ACS**

(Contd. of page 1)

*Harmful if swallowed or if inhaled.*

*Causes severe skin burns and eye damage.*

**· Precautionary statements**

*Keep/Store away from clothing and other combustible materials*

*Take any precaution to avoid mixing with combustibles.*

*Do not breathe dusts or mists.*

*Wash thoroughly after handling.*

*Do not eat, drink or smoke when using this product.*

*Use only outdoors or in a well-ventilated area.*

*Wear protective gloves/protective clothing/eye protection/face protection.*

*Wear fire/flammable resistant/retardant clothing.*

*IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.*

*If swallowed: Rinse mouth. Do NOT induce vomiting.*

*If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.*

*IF INHALED: Remove person to fresh air and keep comfortable for breathing.*

*If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.*

*Continue rinsing.*

*If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.*

*Immediately call a POISON CENTER/doctor.*

*Specific treatment (see on this label).*

*Wash contaminated clothing before reuse.*

*In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.*

*In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.*

*Store locked up.*

*Dispose of contents/container in accordance with local/regional/national/international regulations.*

**· Classification system:**

**· NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 2

*The substance possesses oxidizing properties.*

**· HMIS-ratings (scale 0 - 4)**



Health = \*3

Fire = 0

Reactivity = 2

**· Other hazards**

**· Results of PBT and vPvB assessment**

**· PBT:** Not applicable.

**· vPvB:** Not applicable.

## 3 Composition/information on ingredients

**· Chemical characterization: Mixtures**

**· Description:**

*Mixture of substances listed below with nonhazardous additions.*

*Mixture: consisting of the following components.*

(Contd. on page 3)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/13/2017

Reviewed on 09/13/2017

Trade name: **Hydrogen Peroxide, ACS**

(Contd. of page 2)

**· Dangerous components:**

CAS: 7722-84-1 EINECS: 231-765-0 RTECS: MX0890000	hydrogen peroxide	≥10-≤35%
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## 4 First-aid measures

**· Description of first aid measures****· General information:**

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Consult your Doctor. Show the safety data sheet to the Doctor. Away from the dangerous area.

**· After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. If breathed in, supply fresh air. If not breathing, give artificial respiration. Consult a Doctor.

**· After skin contact:** Wash off with soap and plenty of water. Consult a Doctor.

**· After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

**· After swallowing:**

Never give anything by mouth to an unconscious person. Rinse mouth with water. If symptoms persist consult a Doctor.

Drink copious amounts of water and provide fresh air. Immediately call a doctor.

**· Information for doctor**

**· Most important symptoms and effects, both acute and delayed** No further relevant information available.

**· Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

## 5 Fire-fighting measures

**· Extinguishing media**

**· Suitable extinguishing agents:** Use fire fighting measures that suit the environment.

**· Special hazards arising from the substance or mixture** No further relevant information available.

**· Advice for firefighters**

**· Protective equipment:** Mouth respiratory protective device.

## 6 Accidental release measures

**· Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

**· Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

**· Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralizing agent.

Pick up mechanically, dispose contaminated material as waste according to Section 13.

Ensure adequate ventilation.

**· Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

(Contd. on page 4)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/13/2017

Reviewed on 09/13/2017

**Trade name: Hydrogen Peroxide, ACS**

(Contd. of page 3)

### · Protective Action Criteria for Chemicals

· PAC-1:		
7722-84-1	hydrogen peroxide	10 ppm
· PAC-2:		
7722-84-1	hydrogen peroxide	50 ppm
· PAC-3:		
7722-84-1	hydrogen peroxide	100 ppm

## 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace. Avoid direct contact with skin and eyes.
- **Information about protection against explosions and fires:** No special requirements.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:** 2 - 8°C
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see Section 7.
- **Control parameters**

· <b>Components with limit values that require monitoring at the workplace:</b>	
7722-84-1 hydrogen peroxide	
PEL	Long-term value: 1.4 mg/m <sup>3</sup> , 1 ppm
REL	Long-term value: 1.4 mg/m <sup>3</sup> , 1 ppm
TLV	Long-term value: 1.4 mg/m <sup>3</sup> , 1 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Avoid contact with the eyes.  
Avoid contact with the eyes and skin.
- **Breathing equipment:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

(Contd. on page 5)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/13/2017

Reviewed on 09/13/2017

**Trade name: Hydrogen Peroxide, ACS**

(Contd. of page 4)

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

## 9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

<b>Form:</b>	Liquid
<b>Color:</b>	Colorless
<b>Odor:</b>	Indeterminate
<b>Odor threshold:</b>	Not determined.

· **pH-value:** Not determined.

· **Change in condition**

**Boiling point/Boiling range:** Undetermined.

· **Flash point:** Not applicable.

· **Flammability (solid, gaseous):** Not applicable.

· **Ignition temperature:**

**Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** See section 10  
Explosive when mixed with combustible material.

· **Explosion limits:**

<b>Lower:</b>	Not Applicable
<b>Upper:</b>	Not Applicable

· **Vapor pressure:** Not Applicable

<b>Density:</b>	Not Applicable
<b>Relative density</b>	Not determined.
<b>Vapor density</b>	Not determined.
<b>Evaporation rate</b>	Not determined.

· **Solubility in / Miscibility with** Not Determined

(Contd. on page 6)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/13/2017

Reviewed on 09/13/2017

Trade name: *Hydrogen Peroxide, ACS*

(Contd. of page 5)

- |   |  |
|---|--|
| <b>· Water:</b>                                   | Not determined.                            |
| <b>· Partition coefficient (n-octanol/water):</b> | Not determined.                            |
| <b>· Viscosity:</b>                               |  |
| <b>Dynamic:</b>                                   | Not determined.                            |
| <b>Kinematic:</b>                                 | Not determined.                            |
| <b>· Solvent content:</b>                         |  |
| <b>Water:</b>                                     | 70.0 %                                     |
| <b>VOC content:</b>                               | 0.00 %                                     |
|   | 0.0 g/l / 0.00 lb/gl                       |
| <b>· Other information</b>                        | No further relevant information available. |

## 10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

### ATE (Acute Toxicity Estimate)

Oral	LD50	1,667 mg/kg
Inhalative	LC50/4 h	36.7 mg/L

### 7722-84-1 hydrogen peroxide

Oral	LD50	500 mg/kg (ATE)
Inhalative	LC50/4 h	11 mg/L (ATE)

- **Primary irritant effect:**
- **on the skin:** Strong caustic effect on skin and mucous membranes.
- **on the eye:**  
Strong caustic effect.  
Strong irritant with the danger of severe eye injury.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**  
The product shows the following dangers according to internally approved calculation methods for preparations:  
Harmful  
Corrosive  
Irritant  
Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

(Contd. on page 7)

US

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/13/2017

Reviewed on 09/13/2017

Trade name: Hydrogen Peroxide, ACS

(Contd. of page 6)

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

7722-84-1 | hydrogen peroxide

3

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability** No further relevant information available.

- **Behavior in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach bodies of water or drainage ditch undiluted or unneutralized.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

Can not be disposed together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packagings:**

- **Recommendation:** Discard must be made according to official regulations.

## 14 Transport information

- **UN-Number** 2014

- **DOT, ADR, IMDG, IATA** UN2014

- **UN proper shipping name** Hydrogen Peroxide, aqueous solution

- **DOT** RQ Hydrogen peroxide, aqueous solutions

- **ADR** 2014 Hydrogen peroxide, aqueous solutions

- **IMDG, IATA** HYDROGEN PEROXIDE, AQUEOUS SOLUTION

(Contd. on page 8)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/13/2017

Reviewed on 09/13/2017

Trade name: Hydrogen Peroxide, ACS

(Contd. of page 7)

· **Transport hazard class(es)** 5.1 (8)

· **DOT**



· **Class** 5.1 Oxidizing substances  
 · **Label** 5.1

· **ADR**



· **Class** 5.1 Oxidizing substances

· **IMDG, IATA**



· **Class** 5.1 Oxidizing substances  
 · **Label** 5.1

· **Packing group** II  
 · **DOT, ADR, IMDG, IATA** II

· **Environmental hazards:**  
 · **Marine pollutant:** No

· **Special precautions for user** Warning: Oxidizing substances  
 · **EMS Number:** F-H,S-Q  
 · **Segregation groups** Peroxides  
 · **Stowage Category** D  
 · **Stowage Code** SW1 Protected from sources of heat.  
 · **Segregation Code** SG16 Stow "separated from" class 4.1  
 SG59 Stow "separated from" permanganates  
 SG72 See 7.2.6.3.2.

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:**

· **ADR**  
 · **Excepted quantities (EQ)** Code: E2  
 Maximum net quantity per inner packaging: 30 ml  
 Maximum net quantity per outer packaging: 500 ml

· **UN "Model Regulation":** UN 2014 HYDROGEN PEROXIDE, AQUEOUS SOLUTIONS, 5.1, II

US

(Contd. on page 9)



# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/13/2017

Reviewed on 09/13/2017

Trade name: *Hydrogen Peroxide, ACS*

(Contd. of page 8)

## 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **Sara**

· **Section 355 (extremely hazardous substances):**

7722-84-1 | hydrogen peroxide

· **Section 313 (Specific toxic chemical listings):**

None of the ingredients is listed.

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

7722-84-1 | hydrogen peroxide

A3

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**



GHS03

GHS05

GHS07

· **Signal word** *Danger*

· **Hazard-determining components of labeling:**

hydrogen peroxide

· **Hazard statements**

May cause fire or explosion; strong oxidizer.

Harmful if swallowed or if inhaled.

Causes severe skin burns and eye damage.

· **Precautionary statements**

Keep/Store away from clothing and other combustible materials

Take any precaution to avoid mixing with combustibles.

Do not breathe dusts or mists.

Wash thoroughly after handling.

Do not eat, drink or smoke when using this product.

(Contd. on page 10)

# Safety Data Sheet

acc. to OSHA HCS

Printing date 09/13/2017

Reviewed on 09/13/2017

**Trade name: Hydrogen Peroxide, ACS**

(Contd. of page 9)

Use only outdoors or in a well-ventilated area.  
 Wear protective gloves/protective clothing/eye protection/face protection.  
 Wear fire/flare resistant/retardant clothing.  
 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
 If swallowed: Rinse mouth. Do NOT induce vomiting.  
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.  
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
 Continue rinsing.  
 If on clothing: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.  
 Immediately call a POISON CENTER/doctor.  
 Specific treatment (see on this label).  
 Wash contaminated clothing before reuse.  
 In case of fire: Use for extinction: CO<sub>2</sub>, powder or water spray.  
 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.  
 Store locked up.  
 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Quality Control Dept.
- **Date of preparation / last revision** 09/13/2017 / -
- **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
 IMDG: International Maritime Code for Dangerous Goods  
 DOT: US Department of Transportation  
 IATA: International Air Transport Association  
 ACGIH: American Conference of Governmental Industrial Hygienists  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 ELINCS: European List of Notified Chemical Substances  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 NFPA: National Fire Protection Association (USA)  
 HMIS: Hazardous Materials Identification System (USA)  
 VOC: Volatile Organic Compounds (USA, EU)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 PBT: Persistent, Bioaccumulative and Toxic  
 vPvB: very Persistent and very Bioaccumulative  
 NIOSH: National Institute for Occupational Safety  
 OSHA: Occupational Safety & Health  
 TLV: Threshold Limit Value  
 PEL: Permissible Exposure Limit  
 REL: Recommended Exposure Limit  
 Ox. Liq. 1: Oxidizing liquids – Category 1  
 Acute Tox. 4: Acute toxicity – Category 4  
 Skin Corr. 1A: Skin corrosion/irritation – Category 1A  
 Eye Dam. 1: Serious eye damage/eye irritation – Category 1