

## 1. Product and Company Identification

Material name	HYDROGEN PEROXIDE, 3%
Version #	02
Revision date	10-05-2011
CAS #	Mixture
Product Codes	J.T.Baker: 5848, P006 Macron: 5241
Synonym(s)	Dihydrogen dioxide solution
Manufacturer	Avantor Performance Materials, Inc.
Address	3477 Corporate Parkway Suite #200 Center Valley, PA 18034 US
Customer Service	855-282-6867
24 Hour Emergency	908-859-2151
Chemtrec	800-424-9300

## 2. Hazards Identification

Emergency overview	WARNING
	Causes skin and eye irritation. Prolonged exposure may cause chronic effects.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Routes of exposure	Inhalation. Skin contact. Eye contact. Ingestion.
Eyes	Causes eye irritation.
Skin	Causes skin irritation.
Inhalation	High mist concentrations may cause irritation of respiratory tract.
Ingestion	May be harmful if swallowed. May cause lung damage.
Target organs	Eyes. Skin. Lungs.
Chronic effects	May cause genetic defects.
Potential environmental effects	Harmful to aquatic organisms.

## 3. Composition / Information on Ingredients

Hazardous components	CAS #	Percent
HYDROGEN PEROXIDE	7722-84-1	2 - 4
Non-hazardous components	CAS #	Percent
WATER	7732-18-5	96 - 98

## 4. First Aid Measures

First aid procedures	
Eye contact	Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
Skin contact	Immediately remove contaminated clothing and shoes and wash skin with soap and plenty of water. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.
Inhalation	Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

<b>Ingestion</b>	Seek medical advice. If ingestion of a large amount does occur, call a poison control center immediately. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.
<b>Notes to physician</b>	Treat symptomatically.
<b>General advice</b>	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.

## 5. Fire Fighting Measures

<b>Flammable properties</b>	The product is not flammable. No unusual fire or explosion hazards noted.
<b>Extinguishing media</b>	
<b>Suitable extinguishing media</b>	Use fire-extinguishing media appropriate for surrounding materials.
<b>Protection of firefighters</b>	
<b>Protective equipment and precautions for firefighters</b>	Use water spray to cool unopened containers. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Cool containers exposed to flames with water until well after the fire is out.
<b>Special protective equipment for fire-fighters</b>	Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. Wear self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode when fighting fires.
<b>Specific methods</b>	In the event of fire and/or explosion do not breathe fumes.

## 6. Accidental Release Measures

<b>Personal precautions</b>	Wear appropriate protective equipment and clothing during clean-up. Keep upwind. Keep out of low areas. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained.
<b>Environmental precautions</b>	Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
<b>Methods for containment</b>	Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewer, basements or confined areas.
<b>Methods for cleaning up</b>	<p>Large Spills: Dike far ahead of spill for later disposal. Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal.</p> <p>Small Spills: Absorb spillage with non-combustible, absorbent material. Collect in a non-combustible container for prompt disposal. Clean surface thoroughly to remove residual contamination.</p> <p>Never return spills in original containers for re-use. Clean up in accordance with all applicable regulations.</p>

## 7. Handling and Storage

<b>Handling</b>	Wear appropriate personal protective equipment. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Wash thoroughly after handling. See Section 8 of the MSDS for Personal Protective Equipment.
<b>Storage</b>	Store in tightly closed original container in a dry, cool and well-ventilated place. Do not store around flammable or combustible materials.

## 8. Exposure Controls / Personal Protection

ACGIH		
Components	Type	Value
HYDROGEN PEROXIDE (7722-84-1)	TWA	1.0000 ppm

## Occupational exposure limits

### U.S. - OSHA

#### Components

#### Type

#### Value

HYDROGEN PEROXIDE (7722-84-1)

PEL

1.0000 ppm

1.4000 mg/m<sup>3</sup>

## Engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

## Personal protective equipment

### Eye / face protection

Wear safety glasses with side shields (or goggles).

### Skin protection

Wear appropriate clothing to prevent repeated or prolonged skin contact.

### Respiratory protection

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

### General hygiene considerations

Provide eyewash station and safety shower. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

## 9. Physical & Chemical Properties

### Appearance

Liquid.

### Color

Colorless.

### Odor

Odorless.

### Odor threshold

Not available.

### Physical state

Liquid.

### Form

Liquid.

### pH

Not available.

### Melting point

32 °F (0 °C)

### Freezing point

32 °F (0 °C) estimated

### Boiling point

212 °F (100 °C) estimated

### Flash point

Not available.

### Evaporation rate

Not available.

### Flammability limits in air, upper, % by volume

Not available.

### Flammability limits in air, lower, % by volume

Not available.

### Vapor pressure

0.01529 kPa

### Vapor density

Not available.

### Specific gravity

1.01

### Relative density

Not available.

### Solubility (water)

Soluble

### Partition coefficient (n-octanol/water)

Not available

### Auto-ignition temperature

Not available.

### Decomposition temperature

Not available.

### Molecular weight

34.01

### Molecular formula

H<sub>2</sub>O<sub>2</sub>

## 10. Chemical Stability & Reactivity Information

<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Conditions to avoid</b>	Excessive heat. Contact with combustibles.
<b>Incompatible materials</b>	Organic compounds. Reducing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.
<b>Possibility of hazardous reactions</b>	Hazardous polymerization does not occur.

## 11. Toxicological Information

Toxicological data	
Product	Test Results
HYDROGEN PEROXIDE, 3% (Mixture)	Acute Inhalation LC50 Rat: 66667 mg/m3 estimated Acute Oral LD50 Rat: 12533 mg/kg estimated
Components	Test Results
HYDROGEN PEROXIDE (7722-84-1)	Acute Inhalation LC50 Rat: 2000 mg/m3 4.00 hours Acute Oral LD50 Rat: 376 mg/kg
<b>Sensitization</b>	Not a skin sensitizer.
<b>Acute effects</b>	May be harmful if swallowed.
<b>Local effects</b>	Irritating to eyes and skin.
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
<b>ACGIH Carcinogens</b>	
HYDROGEN PEROXIDE (CAS 7722-84-1)	A3 Confirmed animal carcinogen with unknown relevance to humans.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	
HYDROGEN PEROXIDE (CAS 7722-84-1)	3 Not classifiable as to carcinogenicity to humans.
<b>Skin corrosion/irritation</b>	Causes skin irritation.
<b>Epidemiology</b>	No epidemiological data is available for this product.
<b>Mutagenicity</b>	May cause genetic defects.
<b>Neurological effects</b>	None known.
<b>Reproductive effects</b>	Contains no ingredient listed as toxic to reproduction
<b>Teratogenicity</b>	No data available to indicate product or any components present at greater than 0.1% may cause birth defects.
<b>Symptoms and target organs</b>	Irritant effects.

## 12. Ecological Information

Ecotoxicological data	
Components	Test Results
HYDROGEN PEROXIDE (7722-84-1)	EC50 Algae: 2.5 mg/l 72.00 hours EC50 Daphnia: 2.4 mg/l 48.00 hours LC50 Fish: 16.4 mg/l 96.00 hours
<b>Ecotoxicity</b>	Expected to be harmful to aquatic organisms.
<b>Persistence and degradability</b>	Expected to be readily biodegradable.
<b>Partition coefficient (n-octanol/water)</b>	Not available

### 13. Disposal Considerations

<b>Disposal instructions</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Contaminated packaging</b>	Offer rinsed packaging material to local recycling facilities. Since emptied containers retain product residue, follow label warnings even after container is emptied.

### 14. Transport Information

#### DOT

Not regulated as dangerous goods.

#### IATA

Not regulated as dangerous goods.

#### IMDG

Not regulated as dangerous goods.

### 15. Regulatory Information

<b>US federal regulations</b>	This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200. All components are on the U.S. EPA TSCA Inventory List.
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#### US EPCRA (SARA Title III) Section 302 - Extremely Hazardous Spill: Reportable quantity

HYDROGEN PEROXIDE (CAS 7722-84-1)	1000 LBS
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#### US EPCRA (SARA Title III) Section 302 - Extremely Hazardous Substance: Threshold Planning Quantity

HYDROGEN PEROXIDE (CAS 7722-84-1)	1000 LBS
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#### CERCLA (Superfund) reportable quantity

None

#### Superfund Amendments and Reauthorization Act of 1986 (SARA)

<b>Hazard categories</b>	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
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<b>Section 311 hazardous chemical</b>	Yes
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#### Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

<b>State regulations</b>	This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.
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**US - New Jersey Community RTK (EHS Survey): Reportable threshold**

HYDROGEN PEROXIDE (CAS 7722-84-1) 500 LBS

**US - Pennsylvania RTK - Hazardous Substances: Listed substance**

HYDROGEN PEROXIDE (CAS 7722-84-1) Listed.

**Saf-T-Data** Health: 2 - Moderate  
Flammability: 0 - None  
Reactivity: 1 - Slight  
Contact: 2 - Moderate  
Lab Protective Equip: B - GOGGLES; LAB COAT; VENT HOOD; PROPER GLOVES  
Storage Color Code: G - Green (General Storage)

**16. Labeling Info**

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**Label Hazard Warning** WARNING

Causes skin and eye irritation. Prolonged exposure may cause chronic effects.

**Label Precautions** Avoid contact with eyes, skin, and clothing. Do not taste or swallow. Wash thoroughly after handling. Keep container closed.

**Label First Aid** Immediately flush eyes with plenty of water for at least 15 minutes. Flush skin thoroughly with water. If gas/fume/vapor/dust/mist from the material is inhaled, remove the affected person immediately to fresh air. Get medical attention if irritation develops or persists. If ingestion of a large amount does occur, call a poison control center immediately.

**17. Other Information**

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**NFPA ratings** Health: 2  
Flammability: 0  
Instability: 1

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