

MATERIAL SAFETY DATA SHEET

<i>Hydrogen Peroxide</i>	MSDS No.:	010
	Revision No.:	4
	Effective Date:	12/27/2010

PRODUCT AND COMPANY INFORMATION – SECTION 1	
Manufacturer/Distributor	Water-Jel Technologies 50 Broad Street Carlstadt, NJ 07072 201-507-8300 800-275-3433
Product Name:	Hydrogen Peroxide
Synonyms:	Hydrogen Dioxide Solution, Dihydrogen Dioxide, Hydrogen Dioxide, Hydroperoxide, Peroxide.
Intended Use:	First aid treatment for minor cuts and scrapes.

**FOR CHEMICAL EMERGENCY, SPILL, LEAK,
FIRE, EXPOSURE, OR ACCIDENT:**

In the continental U.S.: 800-275-3433

For additional information: 201-507-8300

COMPOSITION INFORMATION – SECTION 2	
Chemical Name:	Hydrogen Peroxide
Percent:	3
CAS Number:	7722-84-1
Exposure Limits:	OSHA PEL: 1 ppm (1.4 mg/m ³)
Chemical Name:	Water
Percent:	97
CAS Number:	7732-18-5
Exposure Limits:	No information Available

HAZARDS IDENTIFICATION – SECTION 3	
EMERGENCY OVERVIEW & HAZARDS PRESENT TO MAN AND THE ENVIRONMENT	Caution! May cause skin irritation. May cause respiratory and digestive tract irritation. May cause severe eye irritation and possible injury.
PRIMARY ROUTES OF EXPOSURE	Ingestion, Eye Contact
<i>POTENTIAL HEALTH EFFECTS:</i>	
Eyes:	Causes irritation, redness, and pain.
Skin:	May cause skin irritation. Contact on burn or open skin may cause stinging pain or irritation.
Inhalation:	May cause respiratory irritation.
Ingestion:	Large oral doses may cause irritation and blistering to the mouth, throat, and abdomen. May also cause abdominal pain, vomiting, and diarrhea.

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MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:	Individuals with pre-existing respiratory conditions.
<u>CHRONIC HEALTH EFFECTS:</u>	
<i>Eyes:</i>	May cause corneal injury.
<i>Skin:</i>	May cause skin discoloration.
<i>Inhalation:</i>	Repeated exposure may lead to chemical pneumonitis and pulmonary edema.
<i>Ingestion:</i>	May lead to distention of the esophagus and stomach.

FIRST AID MEASURES – SECTION 4	
SEEK MEDICAL ATTENTION FOR ALL CASES OF OVEREXPOSURE.	
<u>FIRST AID MEASURES:</u>	
<i>Eyes:</i>	Immediately flush eyes with plenty of water for at least fifteen (15) minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.
<i>Skin:</i>	Not expected to require first aid measures. Wash exposed area with soap and water. Get medical advice if irritation develops.
<i>Inhalation:</i>	Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. DO NOT use mouth-to-mouth resuscitation.
<i>Ingestion:</i>	Give several glasses of water to drink to dilute. If large amounts are swallowed, seek medical advice.
<i>Instructions for Physician:</i>	Treat symptomatically and supportively.

FIRE FIGHTING MEASURES – SECTION 5			
<i>NFPA Classification</i>			
<u>Health</u>	<u>Fire</u>	<u>Reactivity</u>	<u>Other</u>
1	0	1	1-Contact
<u>FLAMMABILITY PROPERTIES</u>			
Flash Point:	N/A	Method:	N/A
Flammability Limits: (in air % by volume)		LEL:	N/A
Autoignition Temperature:	N/A		

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<p><u>Hazardous Combustion Products:</u></p> <p>Nitrogen oxides, hydrogen gas, oxygen, hydrazoic acid.</p>
<p><u>Extinguishing Media:</u></p> <p>Use extinguishing media most appropriate for the surrounding fire. Use flooding quantities of water as spray.</p>
<p><u>Prohibited Extinguishing Media:</u></p> <p>Carbon dioxide or other extinguishing agents that smother flames are not effective in extinguishing fires involving oxidizers.</p>
<p><u>Firefighting Instructions:</u></p> <p>As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Non-combustible, substance itself does not burn but may decompose upon heating to produce irritating, corrosive and/or toxic fumes.</p>
<p><u>Unusual Fire and Explosion Hazards:</u></p> <p>No information available.</p>

ACCIDENTAL RELEASE MEASURES – SECTION 6
<p><u>Environmental Precautions:</u></p> <p>Avoid runoff into storm sewers and ditches, which lead to waterways. Clean up spills immediately observing precautions in Section 8, EXPOSURE CONTROLS / PERSONAL PROTECTION. Provide ventilation.</p>
<p><u>Cleanup Methods:</u></p> <p><u>Small spills:</u> Dilute with water and mop up.</p> <p><u>Large spills:</u> Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container.</p>

HANDLING & STORAGE – SECTION 7	
Handling:	Wash thoroughly after handling. Use with adequate ventilation. Avoid contact with eyes, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.
Storage:	Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.
Specific Uses:	First aid treatment for minor cuts and scrapes.

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EXPOSURE CONTROLS / PERSONAL PROTECTION – SECTION 8		
<u>EXPOSURE CONTROLS:</u>		
<u>Exposure Limits Values:</u>		
	OSHA PEL:	ACGIH TLV:
Hydrogen Peroxide	1 ppm (1.4 mb/m ³)	1 ppm TWA (1.4 mg/m ³)
<u>Engineering Controls:</u>		
Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.		
<u>PERSONAL PROTECTIVE EQUIPMENT:</u>		
<u>Respiratory Protection:</u>		
Replace with PPE information.		
<u>Hand Protection:</u>		
Wear appropriate protective gloves.		
<u>Eye/Face Protection:</u>		
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 EN 166.		
<u>Skin Protection:</u>		
Wear appropriate protective gloves and clothing to prevent skin exposure.		
<u>General Hygiene Considerations:</u>		
Wash thoroughly after handling. Do not take internally. Eye wash and safety equipment should be readily available.		
<u>Other Protective Equipment:</u>		
Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.		

PHYSICAL & CHEMICAL PROPERTIES – SECTION 9	
PRODUCT:	Hydrogen Peroxide
<u>General Information:</u>	
Appearance	Clear Liquid
Odor	Slight
<u>Important Health, Safety, and Environmental Information:</u>	
Boiling Point	> 100 deg C
Melting Point	No information available.
Flash Point	No information available.

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Explosive Properties	No information available.
Oxidizing Properties	No information available.
Specific Gravity ($H_2O = 1$)	> 1.000
Water Solubility	Soluble.
Partition Coefficient (<i>n</i> -octanol/water)	No information available.
Viscosity	No information available.
Vapor Pressure (<i>mm Hg</i>)	No information available.
Vapor Density (<i>Air = 1</i>)	> 1.00
Evaporation Rate	No information available.
% Volatile (<i>By Volume @ 68°F</i>)	No information available.

STABILITY & REACTIVITY – SECTION 10

Stability:

Decomposes slowly to release oxygen.

Conditions to avoid:

Incompatible materials, light, ignition sources, metals, excess heat, reducing agents, alkaline materials, oxidizers, and temperatures above 300°C.

Materials to avoid:

Hydrogen Peroxide is incompatible with acetal + acetic acid, acetaldehyde + desiccants, acetic acid, acetic acid + N-heterocycles, acetic acid + 3-thioethanol, acetic anhydride, acetone, alcohols, alcohols + sulfuric acid, aluminum isopropoxide + heavy metals salts, 2-amino-4-methyloxazole, aromatic hydrocarbons + trifluoroacetic acid, azalic acid + sulfuric acid, benzenesulfonic anhydride, tert-butanol + sulfuric acid, carboxylic acids, carbon, coal, diethyl ether, 3,5-dimethyl-3-hexanol + sulfuric acid, dimethylphenylphosphine, diphenyl diselenide, 2-ethoxyethanol + polyacrylamide + toluene, ethyl acetate, formic acid + metaphoric acid, gadolinium hydroxide, gallium + hydrochloric acid, hydrogen + palladium catalyst, hydrogen selenide, iron (III) sulfate + 2-methylpyridine + sulfuric acid, iron (II) sulfate + nitric acid + sodium carboxymethylcellulose, ketene, ketones + nitric acid, lead + trioxane, lithium tetrahydroaluminate, mercury (II) oxide + nitric acid, metals, metal oxides or metal salts, methanol + tert-amine + platinum catalyst, methanol + phosphoric acid, 4-methyl-2, 4, 6-triazatricyclo-undeca-8-ene-3, 5 dione + potassium hydroxide, nitric acid + soils, nitric acid + thiourea, nitrogenous bases, organic compounds, organic materials + sulfuric acid, oxygenated compounds, 2-phenyl-1, 1-dimethylethanol + sulfuric acid, alpha-phenylselenoketones, phosphorus, phosphorus (V) oxide, poly(acetoxyacrylic acid lactone) + poly(2-hydroxyacrylic acid), sulfuric acid, tetrahydrothiophene, tin (II) chloride, unsaturated compounds, and vinyl acetate.

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<u>Hazardous Decomposition Products:</u>
Nitrogen oxides, hydrogen gas, oxygen, hydrazoic acid.
<u>Hazardous Polymerization:</u>
No information available

TOXICOLOGICAL INFORMATION – SECTION 11				
<u>Type of Test</u>	<u>Route of Exposure</u>	<u>Effects</u>	<u>Species Observed</u>	<u>Dose Data</u>
LC ₅₀ (Hydrogen Peroxide)	Inhalation	Death	Rat	2000 mg/m ³
LD ₅₀ (Hydrogen Peroxide)	Oral	Death	Mouse	2000 mg/kg
LD ₅₀ (Hydrogen Peroxide)	Oral	Death	Rabbit	820 mg/kg
LD ₅₀ (Hydrogen Peroxide)	Oral	Death	Rat	1518 mg/kg
LD ₅₀ (Water)	Oral	Death	Rat	> 90 mL/kg

ECOLOGICAL INFORMATION – SECTION 12
<u>Ecotoxicity:</u>
No information available.
<u>Mobility:</u>
No information available.
<u>Persistence and Degradability:</u>
No information available.
<u>Bio accumulative Potential:</u>
No information available.

DISPOSAL CONSIDERATION – SECTION 13
Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

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TRANSPORT INFORMATION – SECTION 14	
<u>DOT CLASSIFICATION:</u>	
UN Number:	Not Regulated for Domestic Transportation.
Class:	
Proper Shipping Name:	
Packing Group:	
Marine Pollutant:	
Other Information:	
<u>IATA CLASSIFICATION:</u>	
Un Number:	Not Regulated for International Air Transportation.
Class:	
Proper Shipping Name:	
Packing Group:	
Marine Pollutant:	
Other Information:	
<u>IMDG CLASSIFICATION:</u>	
Un Number:	Not Regulated for International Water Transportation.
Class:	
Proper Shipping Name:	
Packing Group:	
Marine Pollutant:	
Other Information:	

REGULATORY INFORMATION – SECTION 15	
<u>US REGULATIONS</u>	
ACGIH	Listed – Hydrogen Peroxide – TWA: 1 ppm (1.4 mg/m ³)
CAA Section 112	Not Listed
CERCLA	Not Listed
IARC	Listed – Hydrogen Peroxide – Group 3 or 4
NTP	Not Listed
OSHA	Listed – Hydrogen Peroxide – PEL: 1 ppm (1.4 mg/m ³)
SARA Title III	Not Listed
TSCA	Not Listed

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<u>STATE REGULATIONS</u>	
MA substance List	Listed – Hydrogen Peroxide – 2,4,5,E,F6
NJ RTK Hazardous Substance List	Listed – Hydrogen Peroxide
PA Hazardous Substance List	Listed – Hydrogen Peroxide
Canadian WHMIS	Listed – Hydrogen Peroxide 3%

To the best of our knowledge, the information contained herein is accurate. However, neither Water-Jel Technologies, nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.