



Hydrogen Peroxide 1-7%

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SECTION 1. IDENTIFICATION

Product identifier used on the label

: **Hydrogen Peroxide 1-7%**

Product Code(s) : Not available.

Recommended use of the chemical and restrictions on use

: Reagent: Chemical intermediate.

Chemical family

: Inorganic peroxide solution.

Name, address, and telephone number
of the supplier:

Borden & Remington Corp

63 Water St.
PO Box 2573
Fall River, MA, USA
02722

Supplier's Telephone # : 508-675-0096

24 Hr. Emergency Tel # : Chemtrec 1-800-424-9300 (Within Continental U.S.); Chemtrec 703-527-3887
(Outside U.S.).

Name, address, and telephone number of
the manufacturer:

Refer to supplier

SECTION 2. HAZARDS IDENTIFICATION

Classification of the chemical

Clear colourless liquid. Odorless.

This material is not classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Label elements

Signal Word

None required.

Hazard statement(s)

None required.

Precautionary statement(s)

None required.

Other hazards

Other hazards which do not result in classification: May cause mild skin irritation. May cause mild eye irritation.
Ingestion may cause irritation of the mouth, throat and stomach.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Pure substance

<u>Chemical name</u>	<u>Common name and synonyms</u>	<u>CAS #</u>	<u>Concentration</u>
Hydrogen peroxide	Dihydrogen dioxide	7722-84-1	1.0 - 7.0
Water	H2O	7732-18-5	Balance

SECTION 4. FIRST-AID MEASURES

Description of first aid measures



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- Ingestion* : Call a POISON CENTER or doctor/physician if you feel unwell. Do not induce vomiting. Have victim rinse mouth with water, then give one to two glasses of water to drink. Never give anything by mouth to an unconscious person.
- Inhalation* : Immediately remove person to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen by qualified medical personnel only. Seek immediate medical attention/advice.
- Skin contact* : Flush with large amounts of water for 15 minutes. If skin irritation occurs, get medical advice/attention.
- Eye contact* : Flush eyes with water for at least 15 minutes. If eye irritation persists: get medical advice/attention.

Most important symptoms and effects, both acute and delayed

- : May cause mild eye irritation. Symptoms may include tearing, redness and discomfort.
May cause mild skin irritation. Symptoms may include redness, itching and swelling.
Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Indication of any immediate medical attention and special treatment needed

- : Treat symptomatically.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing media

Suitable extinguishing media

- : Fires should be flooded with large amounts of water. Avoiding using other types of extinguishing materials, such as foam or dry chemicals.

Unsuitable extinguishing media

- : Avoid using Carbon dioxide or other similar extinguishing agents as they are not effective in fires involving oxidizers.

Special hazards arising from the substance or mixture / Conditions of flammability

- : May intensify fire; oxidizer. Substance releases oxygen when heated, which may increase the severity of an existing fire.

Flammability classification (OSHA 29 CFR 1910.106)

- : Not flammable.

Hazardous combustion products

- : Oxygen.

Special protective equipment and precautions for firefighters

Protective equipment for fire-fighters

- : Firefighters must use standard protective equipment including flame retardant coat, helmet with face shield, gloves, rubber boots, and in enclosed spaces, SCBA.

Special fire-fighting procedures

- : Fight fires from a safe distance. Evacuate personnel to safe areas. Firefighters should wear proper protective equipment and self-contained breathing apparatus with full face piece operated in positive pressure mode. A full-body chemical resistant suit should be worn. Move containers from fire area if safe to do so. Water spray may be useful in cooling equipment exposed to heat and flame.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

- : All persons dealing with clean-up should wear the appropriate protective equipment including self-contained breathing apparatus. Keep all other personnel upwind and away from the spill/release. Restrict access to area until completion of clean-up. Refer to protective measures listed in sections 7 and 8.

Environmental precautions

- : Ensure spilled product does not enter drains, sewers, waterways, or confined spaces. For large spills, dike the area to prevent spreading.

Methods and material for containment and cleaning up



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- : Ventilate area of release. Remove all sources of ignition. Stop leak if you can do so without risk. Dike for water control. Contain and absorb spilled liquid with non-combustible, inert absorbent material (e.g. sand), then place absorbent material into a container for later disposal (see Section 13). Contact the proper local authorities.

Special spill response procedures

- : If a spill/release in excess of the EPA reportable quantity is made into the environment, immediately notify the national response center in the United States (phone: 1-800-424-8802).
 US CERCLA Reportable quantity (RQ): None reportable.

SECTION 7. HANDLING AND STORAGE

Precautions for safe handling

- : Use in a well-ventilated area. Wear chemically resistant protective equipment during handling. Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Keep away from combustible material. Label containers appropriately. Wash thoroughly after handling. Keep containers closed when not in use.

Conditions for safe storage

- : Store in a cool, dry, well-ventilated area. Store away from incompatibles and out of direct sunlight. Storage area should be clearly identified, clear of obstruction and accessible only to trained and authorized personnel. No smoking in the area. Store in vented containers. Protect from sunlight.

Incompatible materials

- : Combustible materials.: Nitric acid: Organic materials: Metals: Reducing agents: Potassium Pentaborate Tetrahydrate.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

<u>Chemical Name</u>	<u>ACGIH TLV</u>		<u>OSHA PEL</u>	
	<u>TWA</u>	<u>STEL</u>	<u>PEL</u>	<u>STEL</u>
Hydrogen peroxide	1 ppm	N/Av	1 ppm ; 1.4 mg/m ³	N/Av
Water	N/Av	N/Av	N/Av	N/Av

Exposure controls

Ventilation and engineering measures

- : Provide exhaust ventilation or other engineering controls to keep the airborne concentration of vapours below their respective threshold limit value. Use explosion-proof equipment.

Respiratory protection

- : Respiratory protection is required if the concentrations exceed the TLV. Wear a positive-pressure supplied-air respirator. Advice should be sought from respiratory protection specialists. Respirators should be selected based on the form and concentration of contaminants in air, and in accordance with OSHA (29 CFR 1910.134) or CSA Z94.4-02.

Skin protection

- : Wear protective gloves. Advice should be sought from glove suppliers.

Eye / face protection

- : Safety goggles or glasses as appropriate for the job.

Other protective equipment

- : None required under normal conditions.

General hygiene considerations

- : Avoid breathing vapour or mist. Avoid contact with skin, eyes and clothing. Upon completion of work, wash hands before eating, drinking, smoking or use of toilet facilities. Remove soiled clothing and wash it thoroughly before reuse.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance : Clear colourless liquid.
- Odour : Odorless



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Odour threshold : N/Av
pH : 5-6
Melting/Freezing point : Not available.
Initial boiling point and boiling range
: 100°C (212°F)
Flash point : N/Av
Flashpoint (Method) : N/Av
Evaporation rate (BuAe = 1) : 0
Flammability (solid, gas) : Not applicable.
Lower flammable limit (% by vol.)
: N/Av
Upper flammable limit (% by vol.)
: N/Av
Oxidizing properties : This product contains a strong oxidizing agent.
Explosive properties : Not explosive
Vapour pressure : 22 mmHG @ 30°C
Vapour density : N/Av
Relative density / Specific gravity
: 1.0
Solubility in water : Soluble
Other solubility(ies) : Not available.
Partition coefficient: n-octanol/water or Coefficient of water/oil distribution
: N/Av
Auto-ignition temperature : N/Av
Decomposition temperature : 150-152°C
Viscosity : N/Av
Volatiles (% by weight) : N/Av
Volatile organic Compounds (VOC's)
: N/Av
Absolute pressure of container
: N/Av
Flame projection length : N/Av
Other physical/chemical comments
: None known or reported by the manufacturer.

SECTION 10. STABILITY AND REACTIVITY

Reactivity : Not normally reactive.
Chemical stability : Material is stable under normal conditions.
Possibility of hazardous reactions
: No dangerous reaction known under conditions of normal use.
Conditions to avoid : Avoid heat and open flame. Ensure adequate ventilation, especially in confined areas. Avoid contact with incompatible materials. Keep out of direct sunlight. Keep away from combustible material.
Incompatible materials : Combustible materials.: Nitric acid: Organic materials: Metals: Reducing agents: Potassium Pentaborate Tetrahydrate.
Hazardous decomposition products
: None known, refer to hazardous combustion products in Section 5.



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SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure:

Routes of entry inhalation : YES

Routes of entry skin & eye : YES

Routes of entry Ingestion : YES

Routes of exposure skin absorption
: NO

Potential Health Effects:

Signs and symptoms of short-term (acute) exposure

Sign and symptoms Inhalation

- : If product is heated or mists are formed, inhalation may cause irritation to the nose, throat and respiratory tract. Symptoms may include coughing, choking and wheezing. Inhalation of extremely high concentrations could cause pulmonary edema (fluid accumulation). Symptoms of pulmonary edema (chest pain, shortness of breath) may be delayed.

Sign and symptoms ingestion

- : Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Sign and symptoms skin

- : Direct skin contact may cause slight or mild, transient irritation.

Sign and symptoms eyes

- : Direct eye contact may cause slight or mild, transient irritation.

Potential Chronic Health Effects

- : None known or reported by the manufacturer.

Mutagenicity

- : Not expected to be mutagenic in humans.

Carcinogenicity

- : This material is not classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015). Contains the following chemicals listed as confirmed animal carcinogens (A3) by ACGIH: Hydrogen peroxide .

Reproductive effects & Teratogenicity

- : Not expected to have other reproductive effects.

Sensitization to material

- : Not expected to be a skin or respiratory sensitizer.

Specific target organ effects

- : This material is not classified as hazardous under U.S. OSHA regulations (29CFR 1910.1200) (Hazcom 2012) and Canadian WHMIS regulations (Hazardous Products Regulations) (WHMIS 2015).

Medical conditions aggravated by overexposure

- : Pre-existing skin, eye and respiratory disorders.

Synergistic materials

- : Not available.

Toxicological data

- : There is no available data for the product itself, only for the ingredients. See below for individual ingredient acute toxicity data.
The calculated ATE values for this mixture are:
ATE oral =17042.85 mg/kg

<u>Chemical name</u>	<u>LC₅₀(4hr)</u>	<u>LD₅₀</u>	
	<u>inh. rat</u>	<u>(Oral, rat)</u>	<u>(Rabbit, dermal)</u>
Hydrogen peroxide	0.17 mg/L 4 h (no deaths)	1193 mg/kg	>2000 mg/kg
Water	N/Av	>90 mL/kg	N/Av



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Other important toxicological hazards

: None known or reported by the manufacturer.

SECTION 12. ECOLOGICAL INFORMATION

Ecotoxicity : Contains material that may be harmful in the environment. Do not allow material to contaminate ground water system. See the following tables for the substance's ecotoxicity data.

Ecotoxicity data:

<u>Ingredients</u>	CAS No	Toxicity to Fish		
		LC50 / 96h	NOEC / 21 day	M Factor
Hydrogen peroxide	7722-84-1	16.4mg/L (Fathead minnow)	N/Av	None.
Water	7732-18-5	No information available.	No information available.	Not applicable.

<u>Ingredients</u>	CAS No	Toxicity to Daphnia		
		EC50 / 48h	NOEC / 21 day	M Factor
Hydrogen peroxide	7722-84-1	2.4mg/L Water flea	N/Av	None.
Water	7732-18-5	No information available.	No information available.	Not applicable.

<u>Ingredients</u>	CAS No	Toxicity to Algae		
		EC50 / 96h or 72h	NOEC / 96h or 72h	M Factor
Hydrogen peroxide	7722-84-1	N/Av	0.63 mg/L (Green algae)	None.
Water	7732-18-5	No information available.	No information available.	Not applicable.

Persistence and degradability

: Biodegradation is not applicable to inorganic materials.

Bioaccumulation potential

: No data is available on the product itself.

<u>Components</u>	<u>Partition coefficient n-octanol/water (log Kow)</u>	<u>Bioconcentration factor (BCF)</u>
Hydrogen peroxide (CAS 7722-84-1)	1.50	no bioaccumulation
Water (CAS 7732-18-5)	N/Av	N/Av

Mobility in soil : No data is available on the product itself.

Other Adverse Environmental effects

: No data is available on the product itself.

SECTION 13. DISPOSAL CONSIDERATIONS

Handling for Disposal

: Handle waste according to recommendations in Section 7. Empty containers retain residue (liquid and/or vapour) and can be dangerous. Do not cut, weld, drill or grind on or near this container.



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- Methods of Disposal** : Dispose in accordance with all applicable federal, state, provincial and local regulations.
- RCRA** : If this product, as supplied, becomes a waste in the United States, it may meet the criteria of a hazardous waste as defined under RCRA, Title 40 CFR 261. It is the responsibility of the waste generator to determine the proper waste identification and disposal method.
 For disposal of unused or waste material, check with local, state and federal environmental agencies.

SECTION 14. TRANSPORTATION INFORMATION

Regulatory Information	UN Number	UN proper shipping name	Transport hazard class(es)	Packing Group	Label
49CFR/DOT	None.	Not regulated.	not regulated	none	
49CFR/DOT Additional information	None.				
TDG	None.	Not regulated.	not regulated	none	
TDG Additional information	None.				
ICAO/IATA	None.	Not regulated.	not regulated	none	
ICAO/IATA Additional information	None.				
IMDG	None.	Not regulated.	not regulated	none	
IMDG Additional information	None.				

Special precautions for user : Keep away from flames and hot surfaces. - No smoking.

Environmental hazards : See ECOLOGICAL INFORMATION, Section 12.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

: This information is not available.

SECTION 15 - REGULATORY INFORMATION

US Federal Information:

Components listed below are present on the following U.S. Federal chemical lists:



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Ingredients	CAS #	TSCA Inventory	CERCLA Reportable Quantity (RQ) (40 CFR 117.302):	SARA TITLE III: Sec. 302, Extremely Hazardous Substance, 40 CFR 355:	SARA TITLE III: Sec. 313, 40 CFR 372, Specific Toxic Chemical	
					Toxic Chemical	de minimus Concentration
Hydrogen peroxide	7722-84-1	Yes	N/Ap	1000 lb TPQ (concentration >52%)	No	N/Ap
Water	7732-18-5	Yes	N/Ap	N/Av	No	N/Ap

SARA TITLE III: Sec. 311 and 312, SDS Requirements, 40 CFR 370 Hazard Classes: None. . Under SARA Sections 311 and 312, the EPA has established threshold quantities for the reporting of hazardous chemicals. The current thresholds are 500 pounds for the threshold planning quantity (TPQ), whichever is lower, for extremely hazardous substances and 10,000 pounds for all other hazardous chemicals.

US State Right to Know Laws:

The following chemicals are specifically listed by individual States:

Ingredients	CAS #	California Proposition 65		State "Right to Know" Lists					
		Listed	Type of Toxicity	CA	MA	MN	NJ	PA	RI
Hydrogen peroxide	7722-84-1	No	N/Ap	Yes	Yes	Yes	Yes	Yes	Yes
Water	7732-18-5	No	N/Ap	No	No	No	No	No	No

Canadian Information:

Canadian Environmental Protection Act (CEPA) information: All ingredients listed appear on the Domestic Substances List (DSL).

Canadian WHMIS Classification: Refer to Section 2 for a WHMIS Classification for this product.

International Information:

Components listed below are present on the following International Inventory list:

Ingredients	CAS #	European EINECS	Australia AICS	Philippines PICCS	Japan ENCS	Korea KECI/KECL	China IECSC	NewZealand IOC
Hydrogen peroxide	7722-84-1	231-765-0	Present	Present	(1)-419	KE-20204	Present	HSR001326, HSR001449, HSR001450 (dilution)
Water	7732-18-5	231-791-2	Present	Listed	Listed	KE-35400	Present	Listed

SECTION 16. OTHER INFORMATION

Legend

: ACGIH: American Conference of Governmental Industrial Hygienists
CA: California
CAS: Chemical Abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability Act of 1980
CFR: Code of Federal Regulations
CSA: Canadian Standards Association
DOT: Department of Transportation
HMIS: Hazardous Materials Identification System



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HSDB: Hazardous Substances Data Bank
 IARC: International Agency for Research on Cancer
 Inh: Inhalation
 LC: Lethal Concentration
 LD: Lethal Dose
 MA: Massachusetts
 MN: Minnesota
 N/Ap: Not Applicable
 N/Av: Not Available
 NFPA: National Fire Protection Association
 NIOSH: National Institute of Occupational Safety and Health
 NJ: New Jersey
 NTP: National Toxicology Program
 OSHA: Occupational Safety and Health Administration
 PA: Pennsylvania
 PEL: Permissible exposure limit
 RCRA: Resource Conservation and Recovery Act
 RI: Rhode Island
 RTECS: Registry of Toxic Effects of Chemical Substances
 SARA: Superfund Amendments and Reauthorization Act
 STEL: Short Term Exposure Limit
 TDG: Canadian Transportation of Dangerous Goods Act & Regulations
 TLV: Threshold Limit Values
 TWA: Time Weighted Average
 WHMIS: Workplace Hazardous Materials Identification System

References : Canadian Centre for Occupational Health and Safety, CCHInfoWeb Databases, 2015 (Chempendium, RTECs, HSDB, INCHEM). 2015
 European Chemicals Agency, Classification Legislation, 2015
 Material Safety Data Sheet from manufacturer.
 OECD: Organisation for Economic Co-operation and Development 2015

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Other special considerations for handling : Provide adequate information, instruction and training for operators.

<p>Prepared for: Borden & Remington Corp 63 Water St. Fall River, MA 02722 Telephone: 508-675-0096</p>	
<p>Prepared by: ICC The Compliance Center Inc. Telephone: (888) 442-9628 (U.S.); (888) 977-4834 (Canada) http://www.thecompliancecenter.com</p>	

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