











EMERGENCY NUMBERS:

 (USA) CHEMTREC : 1(800) 424-9300 (24hrs)
 (CAN) CANUTEC : 1(613) 996-6666 (24hrs)
 (USA) Anachemia : 1(518) 297-4444
 (CAN) Anachemia : 1(514) 489-5711

WHMIS	Protective Clothing	TDG Road/Rail
WHMIS CLASS: C E F		TDG CLASS: 5.1 8 PIN: UN2014 PG: II
  	    	 

Section I. Product Identification and Uses

Product name	HYDROGEN PEROXIDE, 30% SOLUTION	CI#	Not available.
Chemical formula	H ₂ O ₂	CAS#	7722-84-1
Synonyms	AC-4985, CD-4985, 46644, 46633	Code	AC-4985
Supplier	Anachemia Canada. 255 Norman. Lachine (Montreal), Que H8R 1A3	Formula weight	34.01
Material uses	For laboratory use only.		
		Supersedes	

Section II. Ingredients

Name	CAS #	%	TLV
1) HYDROGEN PEROXIDE	7722-84-1	29-32	Exposure limits: ACGIH TWA 1 ppm (1.4 mg/m ³)
2) WATER	7732-18-5	60-75	Not established by ACGIH

Toxicity values of the hazardous ingredients
HYDROGEN PEROXIDE SOLUTION:

 ORAL (LDLo): Acute: 2626 ug/kg (Woman), 1429 mg/kg (Man).
 INTRAVENOUS (LD50): Acute: >50000 mg/kg (Mouse).
 ORAL (LD50): Acute: 2000 mg/kg (Mouse) (90% H₂O₂). 376 mg/kg (Rat) (90% H₂O₂).
 ORAL (LD50): Acute: 820 mg/kg (Rabbit).
 DERMAL (LD50): Acute: 3000 mg/kg (Rat).
 VAPOR (LC50): Acute: >2000 mg/m³ (Rat) (4 hour(s)) (90% H₂O₂).

Section III. Physical Data

Physical state and appearance / Odor	Colorless liquid with pungent odor.
pH (1% soln/water)	3.3
Odor threshold	Not available.
Percent volatile	100% (V/V)
Freezing point	-26°C
Boiling point	106°C
Specific gravity	1.112 @ 20°C (Water = 1)
Vapor density	1.17 (Air = 1)
Vapor pressure	25 mm Hg @ 30°C
Water/oil dist. coeff.	Not available.
Evaporation rate	>1 (n-Butyl acetate = 1).
Solubility	Miscible in water.

Section IV. Fire and Explosion Data

Flash point	Not applicable.
Flammable limits	Not applicable.
Auto-ignition temperature	Not applicable.
Fire degradation products	Oxygen.
Fire extinguishing procedures	Use only flooding quantities of water. Wear adequate personal protection to prevent contact with material or its combustion products. Self contained breathing apparatus with a full facepiece operated in a pressure demand or other positive pressure mode. Cool containing vessels with flooding quantities of water until well after fire is out.
Fire and Explosion Hazards	Strong oxidizer. Contact with clothing or combustibles may cause fire. Contact with organic liquids or vapors may cause immediate fire or explosion, especially if heated, or may result in delayed detonation. Will not burn, but decomposition, which may be caused by heat, will release oxygen which will increase the explosive limit range and burning rate of flammable vapors. Oxygen release from hydrogen peroxide may force organic or hydrogen vapors into an explosive range. Container explosion may occur under fire conditions or when heated. The sensitivity to impact is not available. The product is not sensitive to static discharge.

Section V. Toxicological Properties

Routes of entry	Inhalation and ingestion. Eye contact. Skin contact. Skin absorption.
Effects of Acute Exposure	Harmful by ingestion, inhalation or skin absorption. Corrosive. Target organs: eyes, skin, respiratory system. 75 ppm (HYDROGEN PEROXIDE) is immediately dangerous to life or health.
Eye	Causes severe burns and loss of vision. Eye contact can result in corneal damage or blindness. May cause permanent damage. Eye irritation with discomfort, tearing, or blurring of vision may occur following contact with aqueous solutions of 10% or less. Contact with aqueous concentrations of greater than 10% may result in eye corrosion with corneal or conjunctival ulceration with possible loss of vision.
Skin	Causes severe burns. Skin exposure can result in bleaching of the skin and hair.
Inhalation	Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract. Inhalation of vapors can cause irritation of nose, throat and lungs. Exposure can cause coughing, chest pains, difficulty in breathing, headache, nausea, vomiting, shortness of breath, laryngitis, bronchitis, pulmonary edema. May be fatal.
Ingestion	Ingestion can cause irritation of the upper gastrointestinal tract with pain and distention of the stomach and esophagus due to liberation of oxygen. May cause nausea, vomiting, and diarrhea. May be fatal.

Section V. Toxicological Properties

Effects of Chronic Overexposure	Human health effects of overexposure by skin contact with aqueous solutions of less than 50% may include irritation with discomfort or rash. Prolonged exposure to these lower concentrations or contact with aqueous concentrations of greater than 50% may result in skin burns or ulcerations. Overexposure by inhalation may cause irritation of the upper respiratory passages or nonspecific discomfort such as nausea, headache, or weakness. Ingestion may cause irritation of the gastrointestinal tract with abdominal pain or red blood cell destruction. When used as lavage, hydrogen peroxide has caused gas embolism and gangrene of the intestine at concentrations down to 0.75%. In vitro studies in mammal cells have shown mutagenic action. Dogs exposed by inhalation to 7 ppm for 6 months had lung and skin irritation. Repeated oral administration of the compound in the diet of animals resulted in growth inhibition, reduced weight gain, abnormal liver function, ulcers, and discoloration of the stomach lining with swelling. Long term administration to mice in the drinking water resulted in gastric erosions and duodenal hyperplasia. Carcinogenic effects: Not available. Teratogenic effects: Not available. Toxicity of the product to the reproductive system: Not available. Medical conditions which may be aggravated: Individuals with preexisting diseases of the skin, eye, or respiratory system may be more susceptible to the toxicity of overexposure to this product.
--	--

Section VI. First Aid Measures

Eye contact	Immediate first aid is needed to prevent eye damage. Washing within 1 minute is essential to achieve maximum effectiveness. IMMEDIATELY flush eyes with copious quantities of water for at least 15 minutes holding lids apart to ensure flushing of the entire surface. Seek immediate medical attention.
Skin contact	Immediate first aid is needed to prevent skin damage. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Seek immediate medical attention. Wash contaminated clothing before reusing.
Inhalation	Remove patient to fresh air. Administer approved oxygen supply if breathing is difficult. Administer artificial respiration or CPR if breathing has ceased. Call a physician.
Ingestion	If conscious, wash out mouth with water. Have conscious person drink several glasses of water to dilute. DO NOT induce vomiting. Seek immediate medical attention. Never give anything by mouth to an unconscious or convulsing person. NOTE TO PHYSICIAN: If swallowed, large amounts of oxygen may be released quickly. The distention of the stomach or esophagus may be injurious. Insert of a gastric tube may be advisable.

Section VII. Reactivity Data

Stability	Unstable. Conditions to avoid: High temperatures, sparks, open flames and all other sources of ignition, contamination.
Hazardous decomp. products	Contamination or heat may cause self-accelerating exothermic decomposition with oxygen gas and steam release that can cause dangerous pressures.
Incompatibility	Acids (acetic acid, sulfuric acid, nitric acid, etc.), organic materials, reducing agents, combustible materials, metal and metal salts (finely powdered metals, nickel, brass, copper and its alloys, platinum, palladium, iron, zinc, lead, rust, chromium, silver, manganese, etc.), cyanides, acetone, alcohols, antimony trisulfide, arsenic trisulfides, dimethyl hydrazine, hexavalent chromium compounds, potassium permanganate, oxidizing agents, ketones, ethers, hydrazine, aniline, glycerine, sodium borate, sodium fluoride, urea, sodium carbonate, triethylamine, sodium pyrophosphate.
Reaction Products	Unstable with heat or contamination; Liberation of oxygen gas may result in dangerous pressures. May react dangerously with rust, dust, dirt, iron, copper, heavy metals or their salts (such as mercuric oxide or chloride), alkalis, and with organic materials (especially vinyl monomers). Contact with other material may cause fire and/or explosion. Hazardous polymerization will not occur.

Section VIII. Preventive Measures

HYDROGEN PEROXIDE, 30% SOLUTION page 4/4

Protective Clothing in case of spill and leak	Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.
Spill and leak	Dilute with a large volume of water. May be destroyed with sodium metabisulfite or sodium sulfite (1.9 LBS SO ₂ equivalent per LB. of peroxide) after diluting to 5-10% peroxide. Ventilate area and wash spill site after material pick up is complete. DO NOT touch damaged container or spilled material. Avoid contact with a combustible material (wood, paper, oil, clothing...). Eliminate all sources of ignition.
Waste disposal	Biodegrade in a biological waste-water treatment plant. According to all applicable regulations. Harmful to aquatic life. Can be dangerous if allowed to enter drinking water intakes. Do not contaminate domestic or irrigation water supplies, lakes, streams, ponds, or rivers.
Storage and Handling	Store in a cool place away from heated areas, sparks, and flame. Store in a well ventilated area. Store away from incompatible materials. Do not add any other material to the container. Do not breathe gas/fumes/vapor/spray. In case of insufficient ventilation, wear suitable respiratory equipment. Keep away from direct sunlight or strong incandescent light. Keep container tightly closed and dry. Manipulate in a well ventilated area or under an adequate fume hood. Empty containers may contain a hazardous residue. Handle and open container with care. Take off immediately all contaminated clothing. Avoid contact with a combustible material (wood, paper, oil, clothing...). This product must be manipulated by qualified personnel. Do not get in eyes, on skin, or on clothing. Wash well after use. In accordance with good storage and handling practices. Do not allow smoking and food consumption while handling. Wear suitable protective clothing. Do not use pressure to dispense. Keep above freezing point. May catch fire in contact with combustible materials. Follow procedures specified in the National Fire Protection Association Codes and Standards. Do not store on wood floors. Never return unused peroxide to container; Instead dilute with plenty of water and discard. Wash thoroughly with water before marking 'empty'.

Section IX. Protective Measures

Protective clothing	Face shield and splash goggles. Impervious gloves, apron, coveralls, and/or other resistant protective clothing. Sufficient to protect skin. A OSHA/MSHA jointly approved respirator is advised in the absence of proper environmental controls. If more than TLV, do not breathe vapor. Wear self-contained breathing apparatus. Do not wear contact lenses. Make eye bath and emergency shower available. Ensure that eyewash station and safety shower is proximal to the work-station location.
Engineering controls	Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. Do not use in unventilated spaces.

Section X. Other Information

Special Precautions or comments	<p>Powerful oxidizing agent; may ignite oxidizable materials. Corrosive! Causes severe burns! Risk of serious damage to eyes. Dangerously reactive material! Do not breathe vapor. Avoid all contact with the product. Avoid prolonged or repeated exposure. Manipulate in a well ventilated area or under an adequate fume hood. Keep away from heat, sparks and flame. Contact with other material may cause fire and/or explosion. Contact with other material may form shock, heat or friction sensitive mixtures. Contamination from any source may cause rapid decomposition, oxygen gas release, and dangerous pressures. Handle and open container with care. Container should be opened only by a technically qualified person.</p> <p>RTECS NO: MX0900000 (Hydrogen peroxide).</p> <p>Use extreme care when attempting any reactions because of fire and explosion potential (immediate or delayed). Conduct all initial experiments on a small scale and protect personnel with adequate shielding as the reactions are unpredictable and may be delayed, and may be affected by impurities, contaminants, temperatures, etc. Avoid contamination from any source including metals, dust, and organic materials. Do not wear leather gloves or leather soled shoes because they can ignite within three minutes following contact with peroxide. Cotton clothing can also ignite quickly. Clothing fires and skin damage occur less quickly with 50% or lower hydrogen peroxide than with 70% material, but adequate personal protection is essential for all industrial concentrations. Protective skin creams offer no protection from hydrogen peroxide and should not be used.</p>
--	---



NFPA

Prepared by MSDS Department/Département de F.S..

Validated 23-May-2008



While the company believes the data set forth herein are accurate as of the date hereof, the company makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data are offered solely for your consideration, investigation and verification.