SAFETY DATA SHEET

1 – PRODUCT AND COMPANY IDENTIFICATION

Product Name: **HYDROGEN PEROXIDE 10%**

Product Code: H-5321Z

Product use: For laboratory or industrial use only

Supplier: Cochimbec Inc.
8561 chemin Dalton
Town of Mount-Royal, Quebec
H4T 1V5 CANADA

Telephone: 514-990-1935
Emergency Telephone: (CANUTEC): 613-996-6666

2 – HAZARDS IDENTIFICATION

GHS Classification: Oxidizing liquids (Category 2)
Serious eye damage / Eye irritation (Category 2A)
Skin corrosion / irritation (Category 2)
Specific target organ toxicity – single exposure (Category 3)

Signal word:		**Danger**
Hazard statement:	H270	May cause or intensify fire: oxidizer.
	H315	Causes skin irritation.
	H319	Causes serious eye irritation.
	H335	May cause respiratory irritation.
	H411	Toxic to aquatic life with long lasting effects.
Precautionary statement:	P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	P220	Keep away from clothing and other combustible materials.
	P221	Take all precaution to avoid mixing with combustibles.
	P261	Avoid breathing dust / fume / gas / mist / vapours / spray.
	P264	Wash face, hands and any exposed skin thoroughly after handling.
	P270	Do not eat, drink or smoke when using this product.
	P271	Use only outdoors or in a well-ventilated area.
	P280	Wear protective gloves/protective clothing/eye protection/face protection.

	P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	P303 + P361 + P353 + P363	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Wash contaminated clothing before reuse.
	P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
	P301 + P330 + P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
	P405	Store locked up.
	P501	Dispose of contents / container to an approved waste disposal plant.

3 – COMPOSION / INFORMATION ON INGREDIENTS

Synonyms: **Perox**

INGREDIENT	Concentration	CAS No.	EC No.	Index No.
Hydrogen Peroxide	10 %	7722-84-1	231-765-0	

4 – FIRST AID MEASURES

Inhalation:	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. If victim is not breathing, give artificial respiration and call for medical assistance.
Skin contact:	Wash with plenty of water. Take off contaminated clothing and wash before reuse. Call a POISON CENTER or doctor if you feel unwell. Consult a physician if irritation persists.
Eye contact:	Rinse cautiously with water for several minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses if present and easy to do, continue rinsing. If eye irritation persists get medical advice/attention.
Ingestion:	DO NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water and drink plenty of water afterwards. Get immediate medical attention.
Most important symptoms / effects	Causes serious eye irritation. Causes skin irritation. May cause respiratory tract irritation. Symptoms may occur with delay. Ingestion of high concentrations causes rapid release of oxygen which may expand the oesophagus or stomach resulting in severe damage (bleeding, ulceration or perforation). Expected to cause burns to the gastrointestinal tract. Vapours may cause pulmonary edema. Toxic effects may be delayed.

5 – FIRE-FIGHTING MEASURES

Extinguishing media:	Use only water spray. Do not use carbon dioxide. Do not use organic compounds on this material.
Combustion Exposure Hazards:	Hazardous decomposition products formed under fire conditions: Oxygen.

Fire-Fighting equipment and precaution:	Wear a positive-pressure self-contained breathing apparatus if necessary. Wear chemical resistant clothing as recommended by clothing manufacturer.
Sensitivity to mechanical impact:	Not sensitive.
Sensitivity to static discharge:	Not sensitive.

NFPA **Risk** **0=Low** **4=High**	HEALTH	FLAMMABILITY	REACTIVITY	HAZARDS
	3	0	3	OX

6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Avoid contact with skin and eyes. Use in a properly ventilated area. Use personal protective equipment. Evacuate people to safe areas.
Environmental Precautions:	Prevent further leakage or spillage using personal protection. Avoid product entering into drains. Do not allow product to enter soil or subsoil.
Method & Material for containment and cleaning up:	Ensure proper ventilation. Use personal protective equipment. Contain spillage. Prevent further leakage if possible and safe to do so. Do not use rags or clothes to absorb. Dilute with water for disposal of small quantities. Dispose according to local, state and federal regulations.

7 – HANDLING AND STORAGE

Precautions for safe handling:	Wear personal protective equipment. Do not breathe fume / gas / mist / vapours / spray. Keep away from open heat and hot surfaces. Keep away from contact with clothing and other combustible materials to avoid fire. Do not get on skin, eyes and clothing.
Conditions for Safe Storage:	Store in a cool, dry place away from incompatibles and heat. Keep container tightly closed in a well-ventilated area. Risk of overpressure and bursting due to decomposition in confined container. Protect from direct sunlight.

8 – EXPOSURE CONTROLS AND PERSONAL PROTECTION

COMPONENTS WITH WORKPLACE CONTROL PARAMETERS

COMPONENT	CAS-No	VALUE	CONTROL PARAMETERS	BASIS
Hydrogen Peroxide	7722-84-1	TWA	1 ppm 1.4 mg/m^3	Alberta OEL
		TWA	1 ppm	B.C., Ontario OEL
		TWA	1 ppm 1.4 mg/m^3	Québec OEL
		TWA	1 ppm	ACGIH Threshhold Limits Values (TLV)
		IDLH	75 ppm	NIOSH - IDLH

Eye Protection:	Safety glasses or chemical safety goggles and/or a full face shield if splashing is possible.

Hand Protection:	Use nitrile rubber gloves.
Body Protection:	Use impervious apron or body suit.
Respiratory Protection:	Where risk assessment shows air-purifying respirators are appropriate, use a full-face NIOSH (US) or CEN (EU) approved respirators.
Engineering Controls:	Use with a good local exhaust ventilation.

9 – PHYSICAL AND CHEMICAL PROPERTIES

Physical state:	Liquid.	**Auto ignition temperature:**	N / D
Color:	Colourless	**Upper Explosion Limit:**	N / D
Odour:	Pungent	**Lower Explosion Limit:**	40 % by Volume
Odour threshold::	N/D	**Vapour pressure:**	48 Pa @ 30 °C
pH:	< 3.5	**Vapour density: (air = 1)**	
Melting point:	-33°C	**Relative density**	1.05
Boiling point:	108°C @ 760 mm Hg	**Water solubility:**	Completely soluble
Boiling range:	N / D	**Decomposition temperature:**	N / D
Density	1.05 g/mL @ 25°C	**Refractive Index:**	N / D
Flash point:	N / D	**Viscosity:**	1.8 mPa.s @ 0 °C
Evaporation rate: (n-Butyl Acetate = 1)	N / D	**Partition coeficient: n-octanol / water**	N / D

10 – STABILITY AND REACTIVITY

Chemical stability:	Stable under recommended use and storage conditions.
Possibility of hazardous reactions:	Alkali metals and other products that react with water.
Conditions to avoid:	High temperatures, incompatible materials. Residual hydrogen peroxide that is allowed to dry on organic materials such as paper, fabrics, leather, wood or other combustible materials, can cause the material to ignite and cause a fire.
Incompatible materials:	Organic materials. Reducing agents, Alkalis, combustible material, metals and their salts.
Hazardous decomposition products:	Hazardous decomposition products : Oxygen and Hydrogen.

11 – TOXICOLOGICAL INFORMATION

COMPONENTS	**LD_{50} ORAL**	**LD_{50} DERMAL**	**LC_{50} INHALATION**
Hydrogen Peroxide	1518 mg/kg (rat)	9,200 mg/kg (rabbit)	2,000 mg/m^3 (rat) 4h
Skin Corrosion / irritation	Causes skin irritation		
Serious eye damage / eye irritation	Causes serious eye irritation		
Respiratory or skin sensitisation	Causes severe respiratory irritation. Vapours may cause pulmonary oedema. Toxic effect may be delayed.		
Germ cell Mutagenicity	No data available.		

Carcinogenicity	Listed as an A3 Animal carcinogen by ACGIH. Listed as a group 3 carcinogen by IARC.
Reproductive toxicity	It is not possible to conclude that hydrogen peroxide is a mutagenic. Positive results have been obtained in cultured human cells. Negative results have been obtained in relevant studies using live animals. Positive results have been obtained in short-term mutagenicity tests.
Teratogenicity	No data available
Aspiration hazard	No data available
Symptoms of Exposure	No symptoms are expected when the product is handled appropriately.
Synergistic effects	No data available
Addition information	None.

12 – ECOLOGICAL INFORMATION

COMPONENTS	**Toxicity to fish**	**Toxicity to daphnia and other aquatic invertebrates**	**Toxicity to Algea**
Hydrogen Peroxide	LC_{50} – Pimephales promelas (Fathead minnow) – 16.4 mg/l – 96 h. LC_{50} – Lepomis macrochirus – 56 mg/l – 96 h. static LC_{50} – Oncorhychus mykiss – 10 - 32 mg/l – 96 h. static	EC_{50} – Daphnia magna – 18 - 32 mg/L – 48 h.	No data available
Persistence and degradability	99% - 0.5 h; aerobic		
Bioaccumulative potential	No data available		
Mobility in soil	No data available		
PBT and vPvB assessment	No data available		
Other adverse effects	No data available		

13 – DISPOSAL CONSIDERATIONS

Product	Ensure proper disposal compliance with authorities before disposal.
Contaminated clothing	Wash clothes immediately.
Contaminated packaging	Dispose as unused product above. Dispose of packaging in a safe manner to comply with local, state and federal regulations. Contact a licensed professional waste disposal service to dispose of this material.

14 – TRANSPORT INFORMATION

	TDG
Shipping Name:	HYDROGEN PEROXIDE, AQUEOUS SOLUTION
UN-number:	UN2984
Class & Subclass:	5.1
Packing Group:	III
Limited Quantity:	5 L
ERAP Index:	N / A
ERG #:	140
Inhalation Toxicity:	No
Marine Pollutant	No

15 – REGULATORY INFORMATION

US Regulations	SDS complies with OSHA's Hazard Communication Rule 29, CFR 1910.1200
Canada Classification	This product has been classified in accordance with the hazard criteria of the Hazardous Products Regulations (HPR) and the SDS contains all the information required by the HPR.
International	No information

16 – OTHER INFORMATION

Information on the preparation of SDS:	Prepared by Cochimbec Inc. Safety Personnel Sept. 4, 2018 Revision 3 I.C. 1,3,17
Abbreviations:	ACGIH = American Conference of Governmental Industrial Hygienists ASTM = American Society for Testing and Materials BCF = Bioconcentration Factor CAS = Chemical Abstract Services CCOHS = Canadian Center for Occupational Health & Safety CEN (EU) = Committée Européen de Normalisation CERCLA = Comprehensive Environmental Response Compensation & Liability Act CFR = Code of Federal Regulations CMR = Carcinogenic-mutagenic-toxic for reproduction CPR = Controlled Products Regulations DIN = German Institute for Standardisation DOT = Department of Transport EC_{50} = Half maximal effect concentration EINECS = European Inventory of Existing Commercial Chemical Substances

	GHS = Global Harmonization System GLP = Good Laboratory practice GMO = Genetic Modified Organism IARC = International Agency for research on Cancer IATA = International Air Transport Association ISO = International Organisation for Standardisation IDLH = Immediate danger to life and health IMDG = International Maritime Dangerous Goods LC_{50} = Lethal concentration causing 50% death LD_{50} = Lethal dose causing 50% death LOAEL = Lowest Observed Adverse Effect Level LOEL = Lowest Observed Effect Level N/A = Not Applicable N/D = No Data N/E = Not Established NFPA = National Fire Protection Association NIOSH = National Institute for Occupational Safety & Health NTP = National Toxicology Program OECD = Organisation for Economic Co-operation & Development OEL = Occupational exposure limit OHSC = Occupational health & safety council (committee) OSHA = Occupational Safety & Health Administration PBT = Persistent, Bioaccumulation, Toxic PEL = Permissible Exposure Limit RCRA = Resource Conservation & Recovery Act RTECS = Registry of Toxic Effects of Chemical Substances SARA = Species at Risk Act STEL = Short term exposure limit STEV = Short term exposure value STOT = Specific Target Organ Toxicity TDG = Transport of Dangerous Goods TLV = Threshold limit value TMD = Transport de Matières Dangereuses TSCA = Toxic Substance Control Act TWA = Time weighted Average TWAEV = Time weighted average exposure value UN = United Nations vPvB = very Persistent and very Bioaccumulative VOC = Volatile Organic Compounds WEEL = Workplace Environment Exposure Limit WHO = World Health Organisation WHMIS = Workplace Hazardous Material Information System W/V = Weight / Volume W/W = Weight / Weight

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End of Safety Data Sheet