Safety Data Sheet

Section 1. Identification		
Product Identifier	**Hydrogen Peroxide 35%**	**Version: 6** **Effective Date:** 25 January 2021
Other Means Of Identification	Dihydrogen dioxide	
Supplier/ Manufacturer	Chemfax Products Ltd. 11444 – 42 Street SE Calgary, AB T2C 5C4 Tel: 403-287-2055	
Recommended Use and Restrictions On Use	Bleaching agent, sanitizer, oxidizing agent. No restrictions.	
Product Family	Oxidizer	
Emergency Phone	1-855-887-2055 Monday - Friday 8:00am - 4:30pm MST	

Section 2. Hazard Identification	
Hazard Classification	
Health Hazards	Skin Corrosion/Irritation – Category 1B Eye Damage/Irritation – Category 1 Acute Oral Toxicity – Category 4 Specific Target Organ Toxicity, (Single Exposure) – Category 3 Oxidizing Liquids – Category 2
Signal Word	Danger
Hazard Statement	May intensify fire; oxidizer. Causes severe skin burns and serious eye damage. Harmful if swallowed. May cause respiratory irritation or may cause drowsiness or dizziness.
Precautionary Prevention Statement	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep away from clothing and other combustible materials. Wear protective gloves, clothing, eye and face protection. Wash hands thoroughly after handling. Do not breathe dusts or mists. Use only outdoors or in a well-ventilated area.
Precautionary Response Statement	In case of fire: Use only water spray or appropriate foam to extinguish.

	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Call a doctor if you feel unwell. IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water, or shower if on clothes. Wash contaminated clothing before reuse. IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a doctor if you fee unwell. Specific treatment: Do not induce vomiting unless directed by medical personnel. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediately call a doctor.
Precautionary Storage Statement	Store locked up. Store in a well-ventilated place. Keep containers tightly closed.
Precautionary Disposal Statement	Dispose of contents/container in accordance with local regulations.
Other Hazards	None

Section 3. Composition / Information on Ingredients

Chemical Name	Common Name or Synonyms	CAS NO. and Other Unique Identifiers	% by weight
Hydrogen Peroxide	Dioxidane	7722-84-1	35

Section 4. First-Aid Measures

Eye Contact	Flush eyes with water for 30 minutes until no chemical remains. Seek immediate medical attention.
Skin Contact	Flush area with water. If irritation persists seek medical attention. Launder clothing before reuse.
Inhalation	Remove victim to fresh air. If there is difficulty breathing, seek immediate medical attention.
Ingestion	Rinse mouth with water. Do not induce vomiting. Lay victim on left side to prevent aspiration of any vomit. Seek immediate medical attention.
Most Important Symptoms and Effects Both Acute and Delayed	In case of accidental ingestion, necrosis may result from mucous membrane burns (mouth, esophagus and stomach). Oxygen rapid release may cause stomach swelling and hemorrhaging, which may product major, or even fatal, injury to organs if a large amount has

	been ingested. In case of skin contact, may cause burns, erythema, blisters or even necrosis. Hydrogen Peroxide irritates respiratory system and, if inhaled, may cause inflammation and pulmonary edema. The effects may not be immediate.
Immediate Medical Attention and Special Treatment	Rinse exposed area with plenty of water. Seek medical attention.
Additional First Aid Remarks	Hydrogen peroxide at this concentration is a strong oxidant. Direct contact with the eye is likely to cause corneal damage especially if not washed out immediately. Careful ophthalmologic evaluation is recommended and the possibility of local corticosteroid therapy should be considered. Because of the likelihood of corrosive effects on the gastrointestinal tract after ingestion, and the unlikelihood of systemic effects, attempts at evacuating the stomach via emesis induction or gastric lavage should be avoided. There is a remote possibility, however, that a nasogastric or orogastric tube may be required for the reduction of severe distension due to gas formation.

Section 5. Fire-Fighting Measures	
Suitable and Unsuitable Extinguishing Media	Use ONLY water spray or appropriate foam. DO NOT use CO2 or organic compounds.
Hazardous Combustion Products	Oxygen and steam.
Specific Hazards Arising From the Product	In closed unventilated containers, risk of rupture due to the increased pressure from decomposition. Contact with combustible material may cause fire.
Special Protective Equipment and Precautions For Fire-Fighters	Fire-fighters should wear self-contained breathing apparatus and full protective clothing. Use water spray to cool containers and structures exposed to fire. Strong oxidiser. Contact with combustible materials may cause a fire. Release of oxygen may support combustion. Contact with incompatible materials (eg. Metals, alkalis and reducing agents) will cause hazardous decomposition resulting in the release of large quantities of heat, steam and oxygen gas. Exposure to heat may cause hazardous decomposition. A severe detonation hazard may exist when mixed with organic liquids, eg. kerosene or gasoline. Isolate and restrict area access. Fight fire from a safe distance and from a protected location. Stay upwind. Stop leak only if safe to do so. Containers exposed to intense heat from fires

	should be cooled with water to prevent vapour pressure build-up which could result in container rupture.

Section 6. Accidental Release Measures	
Personal Precautions, Protective Equipment and Emergency Procedures	Chemical resistant (rubber, neoprene) gloves, coveralls, footwear and safety glasses. Eliminate all sources of ignition and remove combustible materials.
Environmental Precautions	Do not allow material to enter surface drains and water courses
Methods and Materials For Containment and Clean-Up	Restrict access to unprotected personnel. Stop any leak only if it safe to do so. Small spills: flush the area with large volumes of water. Large Spills: Dike with earth, sand or inert sorbent material to contain the spill. Remove the liquid with compatible pumps or vacuum equipment. Place in a suitable container for disposal. Flush area with large volumes of water. Keep materials which can burn away from spilled material. Spontaneous combustion hazard: combustible materials exposed to hydrogen peroxide should be immediately submerged in or rinsed with large amounts of water to ensure all hydrogen peroxide is removed. Residual hydrogen peroxide that is allowed to dry (upon evaporation hydrogen peroxide can concentrate) on organic materials such as paper, fabrics, cotton, leather, wood or other combustibles, can cause the materials to ignite and result in a fire.

Section 7. Handling and Storage	
Precautions For Safe Handling	Corrosive material, strong oxidising agent. Wash thoroughly after handling. Empty containers may contain hazardous product residues. Avoid contact with eyes, skin and clothing. Avoid breathing vapours. Never use air pressure to empty a container.
Conditions For Safe Storage	Do not store near combustible materials. Store in a cool, dry well ventilated area. Keep containers tightly closed when not in use. Do not store this material in containers made of light metals – recommended materials are glass, polyvinyl chloride, polyethylene, ceramics, polypropylene. Use adequate venting devices on all packages, containers and tanks and check operation periodically. Do not confine product in unvented vessels or between closed valves. Risk of overpressure and bursting due to decomposition in confined spaces and pipes. Do not store on wooden floors or wooden pallets.

Section 8. Exposure Controls / Personal Protection				
Control Parameters Hydrogen Peroxide	**TWA: 8 Hr** 1 ppm ACGIH	**STEL: 15 min**	**Ceiling**	**IDLH *** 75 ppm
	* Immediately Dangerous to Life and Health			
Exposure Controls	Local exhaust ventilation			
Appropriate Engineering Controls	Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation.			
Individual Protective Measures				
Eye / Face Protection	Safety glasses			
Skin Protection	Chemical resistant (neoprene) gloves, coveralls and footwear			
Respiratory Protection	Air purifying respirator fitted with appropriate cartridges			

Section 9. Physical and Chemical Properties	
Appearance	Clear colourless liquid
Odour	Pungent Odour
Odour Threshold	Not available.
pH	<3.5 @ 20 ºC
Flash Point	Not flammable
Boiling Point and Boiling Range	108 ºC
Melting Point and Freezing point	-33 ºC
Evaporation Rate	Not determined
Flammability (solid, gas)	Not applicable
Upper and Lower Flammability or Explosive Limits	No data
Vapour Pressure	48 Pa @ 30 oC
Vapour Density	Not determined
Relative Density	1.13
Solubility	Miscible
Partition co-efficient, n-Octanol/Water	log Kow = -1.5 @ 20 °C

Auto-ignition Temperature	Not combustible
Decomposition Temperature	100 °C (adiabatic)
Viscosity	1.10 cP @ 20 °C (kinematic)

Section 10. Stability and Reactivity	
Reactivity	Reactive and oxidizing agent.
Chemical Stability	Unstable above 40 ^{o}C
Possibility of Hazardous Reactions	It may react with aluminium with the liberation of flammable hydrogen gas
Conditions to Avoid	High temperatures. Exposure to light. Spontaneous combustion hazard: combustible materials exposed to hydrogen peroxide should be immediately submerged in or rinsed with large amounts of water to ensure that all hydrogen peroxide is removed. Residual hydrogen peroxide that is allowed to dry (upon evaporation hydrogen peroxide can concentrate) on organic materials such as paper, fabrics, cotton, leather, wood or other combustibles, can cause the materials to ignite and result in a fire.
Incompatible Materials	Metals, reducing agents, alkalis, combustible materials, organic materials, heavy metals and their salts.
Hazardous Decomposition Products	When heated to decomposition it emits oxygen.

Section 11. Toxicological Information

Component Toxicity	**LD50 Oral**	**LD50 Dermal**	**LC50 Inhalation**
Hydrogen Peroxide	805mg/kg (Rat)	>6.5g/kg (Rabbit)	>0.17 mg/l/4h -50% solution (Rat)

Likely Routes of Exposure

Skin: May cause burns resulting in permanent damage. Prolonged exposure may cause severe irritation and white discolouration. Burning may result in localised erythema (redness) or even blistering of the skin.

Eyes: May cause burns resulting in permanent damage. Prolonged exposure may cause severe irritation and white discolouration. Burning may result in localised erythema (redness) or even blistering of the skin.

Inhalation: Causes severe respiratory irritation. Vapours may cause pulmonary oedema. Toxic effects may be delayed.

Ingestion:	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. Aspiration into the lungs may occur during ingestion or vomiting, resulting in lung injury.
Acute Toxicity Estimates (ATE)	LD50 1193 mg/kg bw (rat)
STOT (Specific Target Organ Toxicity) – Single Exposure	May cause respiratory irritation.
Aspiration Toxicity	Aspiration risk: may cause lung damage if swallowed.
STOT (Specific Target Organ Toxicity) – Repeated Exposure	Not classified
Skin Corrosion / Irritation	Moderately irritating (rabbit).
Serious Eye Damage / Irritation	Corrosive. Risk of serious damage to eyes.
Respiratory or Skin Sensitization	Did not cause sensitization on laboratory animals.
Carcinogenicity	IARC – Group 3 ACGIH – A3
Reproductive Toxicity - **Sexual Function and Fertility**	No toxicity to reproduction in animal studies.
- **Development of Offspring**	No data.
- **Effects on or via Lactation**	No data.
Germ Cell Mutagenicity	No data
Interactive Effects	No data
Other Adverse Effects	Not applicable

Section 12. Ecological Information	
Ecotoxicity	Hydrogen peroxide: LC50; 42 mg/L (carp) (48 hr) LC50: 37.4 mg/L (fish (96 hr) EC50: 7.7 mg/L (Daphnia) (24 hr) NOEC: 0.1 mg/L (Algae) (72 hr)

Persistence and Degradability	Hydrogen peroxide in the aquatic environment is subject to various reduction or oxidation processes and decomposes into water and oxygen. Hydrogen peroxide half-life in freshwater ranged from 8 hours to 20 days, in air from 10 - 20 hours, and in soils from minutes to hours depending upon microbiological activity and metal contamination.
Bioacumulative Potential	Not available
Biodegradability	Not available
Mobility in Soil	Not available
Other Adverse Effects	Decomposes into oxygen and water. No adverse effects.
Special Remarks	Under ambient conditions quick hydrolysis, reduction or decomposition occurs. Hydrogen peroxide quickly decomposes to oxygen and water.

Section 13. Disposal Considerations	
Disposal Considerations	Dispose of contents / container in accordance with local regulations.

Section 14. Transport Information	
UN Number	2014
UN Proper Shipping Name	Hydrogen Peroxide Aqueous Solution
Transport Hazard Class(es)	5.1 (8)
Packaging Group	II
Environmental Hazards	Not applicable
Bulk Transport	Not applicable
Special Precaution	Not applicable
DOT Erg#	None

Section 15. Regulatory Information	
Canada – DSL Inventory	All components of this product are either on the Domestic Substances List (DSL) or Non-Domestic Substances List (NDSL) or exempt
TSCA	All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt
Additional Information	None

Section 16. Other Information	
NFPA Rating	Health-3/ Flammability-0/Reactivity-3/Special Hazard-Not applicable
HMIS Rating	Health-3/Flammability-0/Reactivity-3/Personal Protection-See Section 8.
Prepared by:	Chemfax Products Ltd., Technical Department
Date Prepared:	6 July, 2012
Date of Latest Revision:	25 January 2021

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