Material Safety Data Sheet

Section 1. Chemical Product and Company Identification		
Product Name:	**Hydrogen Peroxide 35 %**	**Version: 4** **Effective Date: June 25, 2014**
Supplier/ Manufacturer:	Chemfax Products Ltd. 11444 – 42 Street SE Calgary, AB T2C 5C4 Tel: 403-287-2055	
Material Uses	Bleaching agent, sanitiser, oxidising agent	
24 Hour Emergency	Canutec (613) 996-6666	
WHMIS		
This product has been classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR		
HMIS Ratings for this product are: **Health 3** , **Flammability 0** , **Reactivity 3**		

Section 2. Composition and Information on Ingredients		
Name	**CAS#**	**% by weight**
Hydrogen Peroxide	7722-84-1	35
See Section 8 for information on permissible exposure limits and threshold limit values		

Section 3. Hazards Identification	
Physical State and Appearance	Clear colourless liquid with a pungent odour
Hazard Summary	Corrosive, toxic
Routes of Exposure	Skin – contact, Eyes – contact, inhalation, ingestion
Potential Acute Health Effects	**Skin:** Corrosive. 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:** Corrosive. May cause conjunctivitis, corneal burns and

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	permanent damage. Symptoms may occur with delay. **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.
Medical Conditions Aggravated by Exposure	None
See Toxicological Information – Section 11	
Additional Hazard Identification Remarks	None

Section 4. First Aid Measures	
Eye Contact	Flush eyes with water for 30 minutes. Seek medical attention.
Skin Contact	Flush area with water for 15 minutes. 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	Do not induce vomiting. Lay victim on left side to prevent aspiration of any vomit. Seek immediate medical attention.
Notes to Physician	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.
Additional First Aid Remarks	See above

Section 5. Fire Fighting Measures	
Flammability of the Product	Non flammable
Flash Point	Not applicable
Explosive Limits	Not applicable
Auto Ignition Temperature	Not applicable

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Static Discharge	No
Suitable Extinguishing Media	Use **ONLY** water spray or appropriate foam. **DO NOT** use CO_2 or organic compounds
Hazardous Combustion Products	Oxygen and steam
Precautions for Fire Fighting	Fire fighters should wear self contained breathing apparatus and full protective clothing. Use water spray to cool containers and structures exposed to fire.
Special Exposure Hazard	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	Rubber suit, boots
Environmental Precautions	Prevent entry into storm sewers and surface water courses.
Methods for 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.

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Section 7. Handling and Storage	
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.
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 and Personal Protection				
Exposure Guidelines	**TWA: 8 Hr**	**STEL: 15 min**	**Ceiling**	**IDLH ***
Hydrogen peroxide	1 ppm (ACGIH)			75 ppm
	* Immediately Dangerous to Life and Health			
Exposure Controls	Local exhaust ventilation			
Personal Protection				
Respiratory	If exposure limits are exceeded a n air purifying respirator fitted with the appropriate cartridges must be worn			
Skin	Gloves (nitrile, butyl rubber), chemical resistant coveralls and footwear appropriate to work area			
Eyes	Face shield or safety glasses			
Other	Ensure eye wash stations and emergency showers are available			

Section 9. Physical and Chemical Properties	
Physical State and Appearance	Clear colourless liquid with a pungent odour
Odour Threshold	No data
pH	<3.5 (20 ^{o}C)
Boiling Point	108 ^{o}C
Melting Point / Freezing point	-33 ^{o}C
Evaporation Rate	No data
Vapour Density	No data
Vapour Pressure	48 Pa @ 30 ^{o}C
Specific Gravity	1.13
Solubility in Water	Completely miscible
% Volatile	No data
Other Data	None

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Section 10. Stability and Reactivity	
Chemical Stability	Stable
Hazardous Polymerisation	Will not occur
Conditions to Avoid	High temperatures. 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.
Materials to Avoid	Metals, reducing agents, alkalis, combustible materials, organic materials, heavy metals and their salts
Hazardous Decomposition Products	None

Section 11. Toxicological Information	
Principle Routes of Exposure	
Skin:	Corrosive. 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:	Corrosive. May cause conjunctivitis, corneal burns and permanent damage. Symptoms may occur with delay.
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.
Additional Information	
Acute Toxicity	
Hydrogen peroxide	LD50: 805 mg/kg (Rat, oral) LD50: >6500 mg/kg (Rabbit, dermal) LC50: >0.17 mg/l/4h -50% solution (Inhalation, rat)
Chronic Toxic Effects – None known	
Carcinogenicity – IARC – Group 3 ACGIH – A3	
Reproductive Toxicity / Teratogenicity / Embryotoxicity / Mutagenicity – It is not possible to conclude that hydrogen peroxide is 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.	

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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)
BOD and COD	No data
Biodegradability / OECD	No data
Toxicity of the Products of Biodegradation	No data
Special Remarks	Under ambient conditions quick hydrolysis, reduction or decomposition occurs. Hydrogen peroxide quickly decomposes to oxygen and water.

Section 13. Disposal Considerations
Dispose of in accordance with local, provincial and federal regulations

Section 14. Transport Information	
TDG Classification	Hydrogen Peroxide Aqueous Solution: Class 5.1 (8), UN 2014, Packing Group II
Emergency Response Guide #	ERG # 140
Marine Pollutant	No
Special Precautions	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
WHMIS Hazard Class	C – oxidising material D1B – toxic material E - corrosive F – dangerously reactive material
Additional Information	None

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Section 16. Other Information

Prepared by:
Chemfax Products Ltd., Technical Department

Date Prepared: 6 July, 2012

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Disclaimer
Notice to reader

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