



## MATERIAL SAFETY DATA SHEET

### SECTION 1 - CHEMICAL PRODUCT & COMPANY IDENTIFICATION:

**Product Name:** Hydrogen Peroxide  
30-60% Aqueous Solution

**Trade Name:** Same

**Effective Date:** October 6, 2009

**Product Use:** Bleaching / Oxidizing Agent  
in Pulp & Paper, Surface Treatment in Metals  
Industry and Bacterial Agent in Water Treatment.

**Emergency Phone Number:**  
**877-378-7745**

**Manufacturer:**  
**Eko Peroxide LLC**  
Columbus, MS, USA

**Supplier Name & Address:**  
**FLOCHEM LTD.**  
R.R. #7 Guelph, ON CANADA

### SECTION 2 - COMPOSITION/INFORMATION INGREDIENTS:

<u>Ingredients</u>	<u>CAS#</u>	<u>%wt/wt</u>	<u>Exposure Limits</u>
Hydrogen Peroxide	7722-84-1	30-60%	OSHA PEL: 1ppm (1.4 mg/m <sup>3</sup> ) TWA, NIOSH IDLH: 75 ppm
Water	7732-18-5	40-70%	

### SECTION 3 - HAZARDS IDENTIFICATION:

**Emergency Overview:** Hydrogen Peroxide aqueous solution is a clear, colourless liquid that is harmful if swallowed. This product is an Oxidizer that accelerates combustion of organic material (*wood, paper, oil, clothing*). Elevated temperatures above (38°C) can increase the decomposition rate of the product. Material will decompose when exposed to heat, metals, alkalis, reducing agents or impurities and this will generate oxygen gas, steam and heat.

**Route of Entry:**

**Skin Contact:** Prolonged exposure may cause skin irritation or burns.

**Eye Contact:** Severe irritation, redness, tearing and blurred vision. Stinging, burning, opaqueness of cornea. Prolonged contact may cause damage to eye tissue and possible blindness.

**Inhalation:** Irritating to nose, throat and respiratory tract. Severe overexposure could be fatal.

**Inhalation, Chronic:** Can cause nasal and respiratory irritation, dizziness, weakness, fatigue, nausea and headache.

**Ingestion:** Harmful if swallowed. Can burn mouth, throat and stomach. Oxygen gas in the stomach can cause swelling leading to severe injuries. Large exposure may be fatal.

**Effects of Acute Exposure:** (*See Section 11 for Toxicological Information*).

## SECTION 4 - FIRST AID:

**Eyes:** Flush with running water for at least 15 minutes while holding eyelids open. Get medical attention.

**Skin Contact:** Flush contaminated skin with plenty of soap and water. Remove contaminated clothing. Launder contaminated clothing thoroughly before re-use. Seek medical attention if skin is burned or symptoms continue.

**Inhalation:** Remove victim to fresh air. Aid in breathing if necessary. If breathing stops, administer artificial respiration. Seek medical attention. Effects may be delayed for a few hours and aggravated by physical exertion.

**Ingestion:** Give plenty of water to drink to dilute stomach contents. ***Do not induce vomiting.*** Seek immediate medical attention.

**Note to Physician:** Risk of permanent corneal injury and possible blindness if splashed into eyes.

## SECTION 5 - FIRE FIGHTING MEASURES:

### **Flammable Properties:**

This product is not combustible, but a strong oxidizer. Mixtures with combustible or flammable materials may ignite easily, or may explode in contaminated, closed containers. Residual hydrogen peroxide that is dried on organic materials such as wood, paper, fabrics, cotton, leather or other combustibles can cause the materials to ignite and result in a fire. **Auto Ignition Temperature:** Non flammable, but decomposes at approximately 38°C (100°F).

### **Extinguishing Media:**

**USE WATER ONLY!** Use large amounts of water and spray to cool containers. DO NOT use dry chemicals, foam or a fire blanket. For large fires, flood fire area from a distance, do not flush to sewer unless concentration is 1% or less due to explosion hazard. Always stay away from the ends of tanks and wear self-contained breathing apparatus.

**Oxidizer – Keep away from flammable and combustible materials.**

## SECTION 6 - ACCIDENTAL RELEASE MEASURES:

**Leak/Spill:** Ventilate. Eliminate all sources of ignition. Wear full protective equipment including adequate respiratory protection. Review the safety procedures in case of explosion or fire, before proceeding in clean up. Comply with Federal, Provincial and Municipal regulations. Do not use absorbents. Contain small spills using non-combustible material such as vermiculite, sand or earth. Flush combustible materials with large amounts of water.

## SECTION 7 - HANDLING & STORAGE:

**Handling Procedures:** Avoid all skin contact. Ventilate adequately, otherwise wear an appropriate breathing apparatus. Avoid contact with eyes, skin or clothing. Never return unused peroxide to original container. Treat as flammable material; keep away from heat, sparks and open flames. Keep container closed when not in use.

**Storage Procedures:** Store in a cool, dry, well-ventilated place away from other materials. Store in original, vented containers away from strong acids, strong oxidizing and reducing agents. Do not store in heat or direct sunlight. Store away from incompatible materials such as high pH material, metals, salts, organics, dust & dirt. Do not confine in un-vented vessels or between closed valves.

## SECTION 8 - EXPOSURE CONTROLS:

**Exposure Guidelines:** OSHA PEL: 1ppm (1.4 mg/m<sup>3</sup>) TWA ACGIH TLV: 1 ppm TWA NIOSH IDLH: 75 ppm

**Engineering Controls:** Use process enclosures, or local exhaust ventilation to keep airborne levels below recommended exposure limits. Emergency shower should be in close proximity. Eye wash facility should be close in proximity.

### Personal Protective Equipment:

**Gloves:** Chemical resistant gloves. Butyl rubber gloves.

**Respiratory:** For vapour or mist concentration in excess of 10 ppm, a self-contained breathing apparatus (NIOSH/MSHA approved) should be used.

**Eye/Face:** Chemical goggles and face shield.

**Footwear:** Neoprene boots.

**Clothing:** Impermeable apron, PVC or rubber rain suit.

## SECTION 9 - PHYSICAL PROPERTIES:

**Physical State:** Clear, colorless liquid

**Odour Threshold:** Not available

**Vapour Pressure (mmHg):** (at 30 deg C.)

**Vapour Density (AIR=1):** 0.66-0.95 (Air=1)

**Boiling Point:** 103 - 120°C

**Solubility in Water (% w/w):** 100%

**Odour:** Slightly sharp, pungent

**Specific Gravity (water =1):** @ 35% 1.13 @ 50% 1.19

**Viscosity:** 1.05-1.21

**Evaporation Rate:** >1

**pH:** Less than 2

**Freezing Point:** -17 to -56°C

## SECTION 10 - STABILITY & REACTIVITY:

### **Hazardous Decomposition Products:**

Hydrogen Peroxide decomposes on heating to produce oxygen gas, steam and heat.

### Stability:

**Yes:** Stable when product is pure, stored under suitable conditions and temperature is less than 38°C.

**No, which conditions:** Stability is reduced when pH is above 4.0. Heat and contact with combustible materials.

### Conditions to Avoid:

**Reactivity Conditions:** Avoid heating or mixing with organic materials, tissues. Containers can explode in fire. Avoid contamination of any kind. Avoid contact with combustible material.

**Hazardous Products of Decomposition:** Oxygen, steam and heat.

**Sensitivity to Static:** May be sensitive. **Sensitivity to Impact:** Protect against physical damage.

## SECTION 11 - TOXICOLOGICAL INFORMATION:

Harmful if swallowed, ingesting large amounts may be fatal.

**Irritancy of Material:** Extremely corrosive to all tissues, will cause irritation, burns

**Sensitizing Capability of Material:** See route of entry: Skin contact.

**Carcinogenicity of Material:** Not listed

**LD50 of Material, Species & Route:** Oral: >2000 mg/kg (mouse). Vapour: 1437 ppm, 4 hours [rat].

## SECTION 12 - ECOLOGICAL CONSIDERATIONS:

Hydrogen Peroxide occurs naturally as a result of photochemical processes in living organisms.

Product decomposes into water and oxygen. Harmful to aquatic organisms, especially to algae. Freshwater algae are affected by hydrogen peroxide in concentrations of 2-20 mg/L; while 1mg/L affects certain marine algae.

## SECTION 13- DISPOSAL CONSIDERATIONS:

**Waste Disposal:** In accordance with Federal, Provincial or Local government requirements. Contact a waste disposal firm for advice. Empty containers should be rinsed with water prior to disposal. May create fire or explosion hazard.

## SECTION 14 - TRANSPORT INFORMATION:

**TDG Classification:** Class 5.1 (8) Oxidizer, Corrosive UN 2014, PG II

**Proper Shipping Name:** HYDROGEN PEROXIDE, AQUEOUS SOLUTION

## SECTION 15 - REGULATORY INFORMATION:

**WHIMIS Classification:** Class C, DB 2 **DSL Status:** Listed on the DSL.

## SECTION 16 - OTHER INFORMATION:

### Disclaimer:

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