

Material Safety Data Sheet

Hydrogen Peroxide 35%

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Id: LA0548

Product Name: Hydrogen Peroxide 35%

Synonyms: None

Chemical Family: None Known

Application: Oxidizing agent. Bleach & water chemicals.

Distributed By:

Terralink Horticulture Inc.

464 Riverside Road, Abbotsford BC

Prepared By: The Safety, Health and Environment Department of Univar Canada Ltd.

Preparation date of MSDS: 07/06/2008

Telephone number of preparer: 1-866-686-4827

24-Hour Emergency Telephone Number (CHEMTREC): (800) 424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

HAZARDOUS COMPONENTS

Ingredients	Percentage (W/W)	LD50s and LC50s Route & Species:
Hydrogen Peroxide 7722-84-1	35	LD50 (oral, male rat): 1193 mg/kg (35% solution) ; LD50 (oral, female rat): 801 mg/kg (60% solution) ; LD50 (oral, male rat): 75 mg/kg (70% solution) ; LD50 (oral, mouse): 2000 mg/kg (90% solution) ; LD50 (dermal, rabbit): approximately 690 mg/kg (90% solution) ; LD50 (oral, rat): 805 mg/kg (70% solution) ; LC50 (inhalation, rat) ; >0.17mg/l/4h (50% solution) ; LD50 (dermal, rabbit) : > 6500 mg/kg (70% solution)

Notes: No additional remark.

3. HAZARDS IDENTIFICATION

Potential Acute Health Effects:

Eye Contact: Corrosive. May cause conjunctivitis, corneal burns and permanent damage. Symptoms may occur with delay.

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

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

Ingestion: Ingestion of high concentrations causes rapid release of oxygen which may expand the esophagus 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.

4. FIRST AID MEASURES

Eye Contact: In case of contact, or suspected contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention immediately after flushing. Have an ophthalmologist make an evaluation of eye injury.

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Get medical attention. Remove contaminated clothing and launder before reuse.

Inhalation: Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention.

Ingestion: Do NOT induce vomiting. Never give anything by mouth to an unconscious or convulsing person. Seek immediate medical attention. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs.

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 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.

5. FIRE FIGHTING MEASURES

Flash Point: None.

Flash Point Method: Not applicable.

Autoignition Temperature: Not applicable.

Flammable Limits in Air (%): Not applicable.

Extinguishing Media: Do not use CO2 extinguisher on this material; use only water spray or appropriate foam. Do not use organic compounds on this material.

Special Exposure Hazards: Strong oxidizer. Contact with combustible materials may cause a fire. Release of oxygen may support combustion. Contact with incompatible materials (e.g. 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, e.g. 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.

Special Protective Equipment: Fire fighters should wear full protective clothing, including self-contained breathing equipment.

NFPA RATINGS FOR THIS PRODUCT ARE: HEALTH 3 FLAMMABILITY 0 REACTIVITY 3 SPECIAL Oxidizer

HMIS RATINGS FOR THIS PRODUCT ARE: HEALTH 3, FLAMMABILITY 0, REACTIVITY 3

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures: Wear appropriate protective equipment.

Environmental Precautionary Measures: Prevent entry into sewers or streams, dike if needed.

Procedure for Clean Up: Restrict access to unprotected personnel. Stop leak only if safe to do so. Small spills: Flush area with water. Large spills: Dike with earth, sand or inert sorbent material to contain spill. Remove liquid with compatible pumps or vacuum equipment. Place in suitable container for disposal. Flush area with water. Keep materials which can burn away from spilled materials.

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 material to ignite and result in a fire.

7. HANDLING AND STORAGE

Handling: Wash thoroughly after handling. Empty containers may contain hazardous product residues. Avoid contact with eyes, skin and clothing. Avoid breathing vapor. 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. Do not store this material in containers made of light metals. Recommended container materials: glass, polyvinyl chloride, polyethylene, ceramics, polypropylene. Use adequate venting devices on all packages, containers and tanks and check correct 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.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use process enclosure, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

Respiratory Protection: If exposure exceeds occupational exposure limits, use an appropriate NIOSH approved respirator. In case of spill or leak resulting in unknown concentration, use NIOSH approved supplied air respirator.

Gloves: Natural rubber gloves. Butyl rubber gloves. Nitrile gloves.

Skin Protection: Skin contact should be prevented through the use of suitable protective clothing, gloves and footwear, selected for conditions of use and exposure potential. Consideration must be given both to durability as well as permeation resistance.

Eyes: Chemical goggles; also wear a face shield if splashing hazard exists.

Other Personal Protection Data: Ensure that eyewash stations and safety showers are proximal to the work-station location.

Ingredients	Exposure Limit - ACGIH	Exposure Limit - OSHA	Immediately Dangerous to Life or Health - IDLH
Hydrogen Peroxide	1 ppm TLV-TWA	1 ppm TWA 1.4 mg/m ³ TWA	75 ppm

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Color: Clear Colourless

Odor: Pungent

pH < 3.5 (20 deg C)

Specific Gravity: 1.13

Boiling Point: 108 °C / 226.4 °F

Freezing/Melting Point: -33 °C / -27.4 °F

Vapor Pressure: 48 Pa @ 30°C

Vapor Density: Not Available.

% Volatile by Volume: Not Available.

Evaporation Rate: Not Available.

Solubility: Completely miscible.

VOCs: Not Available.

Viscosity: 1.8 mPa.s @ 0°C

Molecular Weight: 34.02 g/Mol

10. STABILITY AND REACTIVITY

Chemical Stability: Stable.

Hazardous Polymerization: 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 material to ignite and result in a fire.

Materials to Avoid: Metals. Reducing agents. Alkalis. Combustible material. Organic materials. Heavy metals and their salts.

Hazardous Decomposition Products: Oxygen. Steam.

Additional Information: No additional remark.

11. TOXICOLOGICAL INFORMATION

Principle Routes of Exposure

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Ingestion: Ingestion of high concentrations causes rapid release of oxygen which may expand the esophagus 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.

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

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

Eye Contact: Corrosive. May cause conjunctivitis, corneal burns and permanent damage. Symptoms may occur with delay.

Additional Information:

Acute Test of Product:

Acute Oral LD50: 805 mg/kg (rat)

Acute Dermal LD50: >6500 mg/kg (rabbit)

Acute Inhalation LC50: Not Available.

Carcinogenicity:

Ingredients	IARC - Carcinogens	ACGIH - Carcinogens
Hydrogen Peroxide	Group 3	A3 - Confirmed animal carcinogen with unknown relevance to humans

Carcinogenicity Comment: No additional information available.

Reproductive Toxicity/ Teratogenicity/ Embryotoxicity/ Mutagenicity: It is not possible to conclude that hydrogen peroxide is mutagenic. Positive results have been obtained in cultured humans cells. Negative results have been obtained in relevant studies using live animals. Positive results have been obtained in short-term mutagenicity tests.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information:

Ingredients	Ecotoxicity - Fish Species Data	Acute Crustaceans Toxicity:	Ecotoxicity - Freshwater Algae Data
Hydrogen Peroxide	LC50 (48 hr) carp: 42 mg/L ; LC50 (96 hr) fish : 37.4 mg/l	EC50 (24 hr) Daphnia : 7.7 mg/l	NOEC (72 hr) Algae : 0.1 mg/l

Other Information:

Under ambient conditions quick hydrolysis, reduction or decomposition occurs. Hydrogen peroxide quickly decomposes to oxygen and water.

13. DISPOSAL CONSIDERATIONS

Disposal of Waste Method: Disposal of all wastes must be done in accordance with municipal, provincial and federal regulations.

Contaminated Packaging: Empty containers should be recycled or disposed of through an approved waste management facility.

14. TRANSPORT INFORMATION

DOT (U.S.):

DOT Shipping Name: HYDROGEN PEROXIDE AQUEOUS SOLUTION

DOT Hazardous Class 5.1 (8)

DOT UN Number: UN2014

DOT Packing Group: II

DOT Reportable Quantity (lbs): Not Applicable.

Notes: No additional remark.

Marine Pollutant: No.

ICAO/IATA:

IATA Proper Shipping Name: HYDROGEN PEROXIDE AQUEOUS SOLUTION

IATA Hazard Class: 5.1 (8)

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UN Number: UN2014
Packing Group: II
IATA Label: Oxidizer. Corrosive.
IATA Remarks: No additional remark.

IMDG:
IMDG Proper Shipping Name: HYDROGEN PEROXIDE AQUEOUS SOLUTION
Hazard Class: 5.1 (8)
UN Number: UN2014
Packing Group: II
Marine Pollutant: No.
IMDG Label: Oxidizer Corrosive.
Remarks: No additional remark.

TDG (Canada):
TDG Proper Shipping Name: HYDROGEN PEROXIDE AQUEOUS SOLUTION
Hazard Class: 5.1 (8)
UN Number: UN2014
Packing Group: II
Note: No additional remark.
Marine Pollutant: No.

15. REGULATORY INFORMATION

U.S. TSCA Inventory Status: All components of this product are either on the Toxic Substances Control Act (TSCA) Inventory List or exempt.

Canadian DSL Inventory Status: All components of this product are either on the Domestic Substances List (DSL) or the Non-Domestic Substances List (NDSL) or exempt.

U.S. Regulatory Rules

Ingredients	CERCLA/SARA - Section 302:	SARA (311, 312) Hazard Class:	CERCLA/SARA - Section 313:
Hydrogen Peroxide	LISTED	Not Listed.	Not Listed.

California Proposition 65: Not Listed.
MA Right to Know List: Listed.
New Jersey Right-to-Know List: Listed.
Pennsylvania Right to Know List: Listed.

WHMIS Hazardous Class:
C OXIDIZING MATERIALS
D1B TOXIC MATERIALS
E CORROSIVE MATERIAL
F DANGEROUSLY REACTIVE MATERIAL



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16. OTHER INFORMATION

Additional Information:

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.

Disclaimer:

NOTICE TO READER:

Univar, expressly disclaims all express or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein, and shall under no circumstances be liable for incidental or consequential damages.

Do not use ingredient information and/or ingredient percentages in this MSDS as a product specification. For product specification information refer to a Product Specification Sheet and/or a Certificate of Analysis. These can be obtained from your local Univar Sales Office.

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*****END OF MSDS*****

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