

Section 1: IDENTIFICATION OF THE MIXTURE AND OF THE COMPANY

Product identifier: HYDR-OX

Other means of identification: Hydrogen peroxide 29%

Relevant identified uses:

For hydroponic use as a water treatment chemical.

Uses advised against:

N/A

Details of the supplier of the safety data sheet:

Supplier:

Green Planet

15374 – 103A Ave. Surrey, BC, Canada V3R 7A2

Tel: (604)-580-1287 Fax: (604)-580-2375

E-Mail : info@mygreenplanet.com

EMERGENCY TELEPHONE NUMBER: 1-866-913-4769

Section 2: HAZARD IDENTIFICATION

Classification of the substance or mixture:

Oxidizing liquids, Category 2

Oral: Acute toxicity (oral), Category 4

Serious eye damage, Category 1

Specific target organ toxicity - single exposure, Category 3

Label elements

Hazard pictograms:



DANGER

Hazard statements:

May intensify fire, oxidizer.

Harmful if swallowed.

Causes serious eye damage.

May cause respiratory irritation.

Precautionary statements:

Keep away from heat. Keep/Store away from clothing/combustible materials. Do not mix with combustibles. Do not breathe gas/mist/vapours/spray. Wash skin thoroughly after handling. Do not eat, drink, or smoke when using this product. Use only outdoors or in a well-ventilated area. Wear protective gloves/ eye protection/ face protection.

First Aid

IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell. Rinse mouth. **IF INHALED:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/ physician.

Storage: Store in a well-ventilated place. Keep container tightly closed. Store locked up.

Disposal: Dispose of contents/ container to an approved waste disposal plant.

Other hazards

Potential Health Effects:

If swallowed: May cause gastrointestinal symptoms, ulceration, burns, accumulation of fluid in the lungs which may be delayed for several hours (severity of effects depends on extent of exposure)

Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Concentration	GHS Classification
Hydrogen peroxide	7722-84-1	29%	See section 2

Section 4: FIRST AID MEASURES

Inhalation: If inhaled, remove victim to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin: In case of contact, immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse.

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.

Ingestion: If swallowed, DO NOT induce vomiting unless directed to do so by medical personnel. Get medical attention immediately. Rinse mouth. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

Notes to physician: Inhalation of the material may cause delayed lung injury resulting in pulmonary edema and pneumonitis. Exposed individuals should be monitored for 72 hours after exposure for the onset of delayed respiratory symptoms.

Most important symptoms and effects - acute and delayed

Symptoms/effects: Causes severe eye damage.

Symptoms/effects after ingestion: Swallowing even a small quantity of this material will result in serious health hazard

Symptoms/effects after inhalation: Inhalation of the material may cause delayed lung injury resulting in pulmonary edema and pneumonitis. Exposed individuals should be monitored for 72 hours after exposure for the onset of delayed respiratory symptoms.

Section 5: FIREFIGHTING MEASURES

Protective equipment: Fire fighters and others who may be exposed to products of combustion should wear full fire fighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand / NIOSH approved or equivalent).

Additional firefighting advice:

Oxidizing material. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion. Decomposition will release oxygen, which will intensify a fire. Cool closed containers exposed to fire with water spray. Closed containers of this material may explode when subjected to heat from surrounding fire. Do not allow water run-off from to enter drains or water courses. Fire fighting equipment should be thoroughly decontaminated after use.

Fire and explosion hazards: Explosive when mixed with combustible material. Avoid breathing fumes from fire exposed material.

Additional safety information: Keep container in a cool place out of direct sunlight. Store only in vented containers. Do not store on wooden pallets. Do not return unused material to its original container. Avoid contamination - Contamination could cause decomposition and



HYDR-OX

Safety Data Sheet

generation of oxygen which may result in high pressure and possible container rupture. Empty drums should be triple rinsed with water before discarding.

Section 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions:

Avoid contact with skin, eyes and clothing. Wear personal protective equipment. Isolate and post spill area. Keep people away from and upwind of spill/leak. Eliminate all sources of ignition and remove combustible materials.

Other: 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 fire.

Environmental Precautions: Do not flush into surface water or sanitary sewer system; if discharged into sewers or watercourses, dilute with plenty of water.

Methods for Containment:

Large spills: Dike to collect large liquid spills. Stop leak and contain spill if this can be done safely.

Small spills: Dilute with large quantities of water. Methods for cleaning up Flush area with flooding quantities of water. Hydrogen peroxide may be decomposed by adding sodium metabisulfite or sodium sulfite after diluting to about 5%.

Section 7: PRECAUTIONS FOR SAFE HANDLING

Handling:

General information on handling: Do not taste or swallow. Do not get in eyes, on skin, or on clothing. Avoid breathing vapor or mist. Avoid contact with clothing and other combustible materials. Use only with adequate ventilation. Wash thoroughly after handling. Keep away from heat, sparks, and flames.

Prevent product contamination. Keep only in the original container. Store in tightly closed container.

DO NOT CUT, DRILL, GRIND, OR WELD ON OR NEAR THIS CONTAINER. Emptied container retains vapor and product residue.

Observe all labelled safeguards until container is cleaned, reconditioned, or destroyed. Avoid contamination.

Storage:

General information on storage conditions: Store in tightly closed vented container. Keep container in a cool, dry, well ventilated area away from sources of ignition such as flame, sparks and static electricity. Store out of direct sunlight. Store in original container. Do not store on wooden pallets. Do not return unused material to its original container. Avoid contamination - Contamination could cause decomposition and generation of oxygen which may result in high pressure and possible container rupture. Empty drums should be triple rinsed with water before discarding.

Store separately from acids, alkalis, reducing agents, organic materials and combustibles.

Section 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Control parameters Exposure Guidelines Ingredients with workplace control parameters.

Chemical name	ACGIH TLV	OSHA PEL	NIOSH	Mexico
Hydrogen peroxide 7722-84-1	TWA: 1 ppm	TWA: 1 ppm TWA: 1.4 mg/m ³	IDLH: 75 ppm TWA: 1 ppm TWA: 1.4 mg/m ³	Mexico: TWA 1 ppm Mexico: TWA 1.5 mg/m ³ Mexico: STEL 2 ppm Mexico: STEL 3 mg/m ³
Chemical name	British Columbia	Quebec	Ontario TWA/EV	Alberta
Hydrogen peroxide 7722-84-1	TWA: 1 ppm	TWA: 1 ppm TWA: 1.4 mg/m ³	TWA: 1 ppm	TWA: 1 ppm TWA: 1.4 mg/m ³

APPROPRIATE ENGINEERING CONTROLS

Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation.

INDIVIDUAL PROTECTION MEASURES

Use chemical splash-type goggles and a full-face shield made of polycarbonate, acetate, polycarbonate/acetate, PETG or thermoplastic.



SKIN AND BODY PROTECTION

Body protection: wear impervious clothing such as an approved splash protective suit made of SBR rubber, PVC (PVC Outershell w/Polyester Substrate), Gore-Tex (Polyestertrilamine w/Gore-Tex), or a specialized HAZMAT Splash or Protective Suite (Level A, B, or C).

Foot protection: wear approved boots made of NBR, PVC, Polyurethane, or neoprene. Overboots made of Latex or PVC, as well as firefighter boots or specialized HAZMAT boots are also permitted. DO NOT wear any form of boot or overboot made of nylon or nylon blends. DO NOT USE cotton, wool or leather as these materials react rapidly with higher concentrations of hydrogen peroxide.

Completely submerge hydrogen peroxide contaminated clothing or other materials in water prior to drying. Residual hydrogen peroxide, if allowed to dry on materials such as paper, fabrics, cotton, leather, wood or other combustibles, can cause the material to ignite and result in a fire.

Hand Protection: For hand protection, wear approved gloves made of nitrile, PVC, or neoprene. DO NOT use cotton, wool or leather for these materials react RAPIDLY with higher concentrations of hydrogen peroxide. Thoroughly rinse the outside of gloves with water prior to removal. Inspect regularly for leaks.

Respiratory Protection: If concentrations in excess of 10 ppm are expected, use NIOSH/DHHS approved self-contained breathing apparatus (SCBA) or other approved air-supplied respirator (ASR) equipment (e.g., a full-face airline respirator (ALR)). DO NOT use any form of air-purifying respirator (APR) or filtering facepiece (dust mask), especially those containing oxidizable sorbents such as activated carbon.

Hygiene measures: Avoid breathing vapours, mist or gas. Clean water should be available for washing in case of eye or skin contamination.

General information: Protective engineering solutions should be implemented and in use before personal protective equipment is considered.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Appearance:	Clear, colourless liquid
Physical State:	Liquid
Colour:	Colourless
Odour:	odourless
Odour threshold:	Not applicable
Ph:	<= 3.7
Melting point/freezing point:	-33 °C
Boiling Point/Range:	108 °C
Flash point:	Not flammable
Evaporation Rate:	> 1 (n-butyl acetate=1)
Flammability (solid, gas):	Not flammable
Flammability Limit in Air:	Not applicable
Upper flammability limit:	N/A
Lower flammability limit:	N/A
Vapor pressure:	23 mm Hg @ 30 °C
Vapor density:	No information available
Density:	1.13 g/cm ³ @ 20°C
Specific gravity:	1.13
Water solubility:	completely soluble
Solubility in other solvents:	No information available
Partition coefficient log Kow:	-1.5 @ 20 °C
Autoignition temperature:	Not combustible
Decomposition temperature:	100 °C (adiabatic)
Viscosity, kinematic:	1.10 cP @ 20 °C
Viscosity, dynamic:	No information available
Explosive properties:	No information available
Oxidizing properties:	Strong oxidizer
Bulk Density	Not applicable
Molecular weight:	34



Section 10: STABILITY AND REACTIVITY

Reactivity:	Reactive and oxidizing agent.
Chemical Stability:	Stable under recommended storage conditions. Decomposes on heating.
Possibility of Hazardous Reactions:	Contact with organic substances may cause fire or explosion. Contact with metals, metallic ions, alkalis, reducing agents and organic matter (such as alcohols or terpenes) may produce self-accelerated thermal decomposition.
Hazardous polymerization:	Hazardous polymerization does not occur.
Conditions to avoid:	Excessive heat; Contamination; Exposure to UV-rays; pH variations.
Incompatible materials:	Combustible materials. Copper alloys, galvanized iron. Strong reducing agents. Heavy metals, Iron, Copper alloys. Contact with metals, metallic ions, alkalis, reducing agents, and organic matter (such as alcohols or terpenes) may produce self-accelerated thermal decomposition.
Hazardous Decomposition Products:	Oxygen which supports combustion. Liable to produce overpressure in container.

Section 11: TOXICOLOGICAL INFORMATION

Product Information

LD50 Oral 50% solution:	LD50 > 225 mg/kg bw (rat)
35 % solution:	LD50 1193 mg/kg bw (rat)
LD50 Dermal 35% solution:	LD50 > 2000 mg/kg bw (rabbit)
LC50 Inhalation 50% solution:	LC50 > 170 mg/m ³ (rat) (4-hr)
Hydrogen Peroxide vapours:	LC0 9400 mg/m ³ (mouse) (5 - 15 minutes)
Hydrogen Peroxide vapours:	LC50 > 2160 mg/m ³ (mouse)
Serious eye damage/eye irritation:	Corrosive. Risk of serious damage to eyes.
Skin corrosion/irritation:	Moderately irritating (rabbit).
Sensitization:	Does not cause sensitization on laboratory animals.
Information on toxicological effects:	Symptoms: Vapours, mists, or aerosols of hydrogen peroxide can cause upper airway irritation, inflammation of the nose, hoarseness, shortness of breath, and a sensation of burning or tightness in the chest. Prolonged exposure to concentrated vapor or to dilute solutions can cause irritation and temporary bleaching of skin and hair. Exposure to vapor, mist, or aerosol can cause stinging pain and tearing of eyes.

Carcinogenicity: This product contains hydrogen peroxide. The International Agency for Research on Cancer (IARC) has concluded that there is inadequate evidence for carcinogenicity of hydrogen peroxide in humans, but limited evidence in experimental animals (Group 3 - not classifiable as to its carcinogenicity to humans). The American Conference of Governmental Industrial Hygienists (ACGIH) has concluded that hydrogen peroxide is a 'Confirmed Animal Carcinogen with Unknown Relevance to Humans' (A3).

Section 12: ECOLOGICAL INFORMATION

Chemical Fate and Pathway: Data for Hydrogen peroxide (7722-84-1)

Biodegradation: Readily biodegradable. (0.02 d) biodegradation 99 %

Octanol Water Partition Coefficient: log Pow = -1.57 (calculated)

Ecotoxicology

Data for HYDROGEN PEROXIDE (7722-84-1)

Aquatic toxicity data: Harmful. Pimephales promelas (fathead minnow) 96 h LC50 = 16.4 mg/l

Aquatic invertebrates: Toxic. Daphnia pulex (Water flea) 48 h EC50 = 2.4 mg/l

Algae: Toxic. Skeletonema costatum 72 h ErC50 = 1.38 mg/l


Chronic toxicity to aquatic invertebrates: Harmful; Daphnia magna (Water flea) 21 d NOEC

Chronic toxicity to aquatic invertebrates: Harmful; Daphnia magna (water flea) 21 d NOEC

Section 13: DISPOSAL CONSIDERATIONS

Waste disposal: Dilution with water is the preferred method of disposal. Dispose of in accordance with federal, provincial and local regulations. Consult a regulatory specialist to determine appropriate provincial or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. Take appropriate measures to prevent release to the environment

Section 14: TRANSPORT INFORMATION

	Land transport (TDG, DOT)	Sea transport (IMDG)
UN No.	UN2014	UN2014
UN Proper shipping name	HYDROGEN PEROXIDE, AQUEOUS SOLUTION	
Transport hazard class(es)	8	
Hazard label(s)		
Packing group	II	
Environmental hazards	Not applicable	

US Department of Transportation (DOT) / Canada Transportation of Dangerous Goods (TDG)

UN Number: 2014
Proper shipping name: Hydrogen peroxide, aqueous solutions
Class: 5.1
Subsidiary hazard class: (8)
Packaging group: II
Marine pollutant: no

International Maritime Dangerous Goods Code (IMDG)

UN Number: 2014
Proper shipping name: Hydrogen peroxide, aqueous solutions with not less than 20 percent but not more than 40 percent hydrogen peroxide (stabilized as necessary)
Class: 5.1
Subsidiary hazard class: (8)
Packaging group: II
Marine pollutant: no

Section 15: REGULATORY INFORMATION

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.

Section 16: OTHER INFORMATION

Indication of changes: Version No.: 2.0 – Nov 25, 2022

Green Planet LLC believes that the information and recommendations contained herein (including data and statements) are accurate as of the date hereof. NO WARRANTY OF FITNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY, OR ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, IS MADE CONCERNING THE INFORMATION PROVIDED HEREIN. The information provided herein relates only to the specific product designated and may not be valid where such product is used in combination with any other materials or in any process. Further, since the conditions and methods of use are beyond the control of Green Planet Wholesale Ltd., expressly disclaims any and all liability as to any results obtained or arising from any use of the product or reliance on such information.