



SAFETY DATA SHEET

This Safety Data Sheet complies with the Canadian Hazardous Product Regulations, the United States Occupational Safety and Health Administration (OSHA) Hazard Communication Standard, 29 CFR 1910 (OSHA HCS), and the European Union Directives.

1. Product and Supplier Identification

- 1.1 **Product:** Hydrogen Peroxide 29%
- 1.2 **Other Means of Identification:** None
- 1.3 **Product Use:** Oxidizing Agent
- 1.4 **Restrictions on Use:** Not to be used with combustible materials
- 1.5 **Producer:** NUTRILIFE PLANT PRODUCTS,
2286 McCallum Rd, Suite 102,
Abbotsford, BC V2S 3P4
Phone: (604) 606-6069
Fax: (604) 638-5116
- Supplier:** As above
- 1.6 **Emergencies:** +1 (604) 606-6069

2. Hazards Identification

2.1 Classification of product or mixture

Note to reader: This product in an untested mixture and GHS classification is based on the classification of the ingredients and their concentrations. Proprietary ingredients, if any, do NOT exhibit any health effects not listed in this SDS.

GHS Classification: Oxidizing Liquid, Category 1
Skin Corrosion, Category 1A
Serious Eye Damage, Category 1
Acute Toxicity, Oral, Category 4
Specific Target Organ Toxicity, Single Exposure, Category 3
(Respiratory)
Acute Aquatic Toxicity, Category 3
Chronic Aquatic Toxicity, Category 3

2.2 GHS Label Elements, including precautionary statements

Pictogram:



Signal Word:

Danger

GHS Hazard Statements: H271: May cause fire or explosion; strong oxidizer
H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage
H318: Causes serious eye damage.
H335: May cause respiratory irritation
H402: Harmful to aquatic life
H412: Harmful to aquatic life with long lasting effects

GHS Precautionary Statements:

Prevention: P210: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220: Keep away from clothing and other combustible materials.
P261: Avoid breathing mist, vapours or spray.
P264: Wash skin thoroughly after handling.
P271: Use only outdoors or in a well-ventilated area
P270: Do not eat, drink or smoke when using this product.
P273: Avoid release to the environment.
P280: Wear protective gloves, eye and face protection
P283: Wear fire resistant or flame-retardant clothing
P321: Specific treatment (see Section 4)

Response: P312: IF SWALLOWED: Call a doctor if you feel unwell.
P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340+P310: IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTRE or doctor.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P306+P360: IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
P363: Wash contaminated clothing before reuse.
P371+P380+P375: In case of major fire and large quantities: Evacuate area. Fight fire remotely due to risk of explosion.
P370+P378: In case of fire: Use water spray to extinguish.

Storage: P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.
P420: Store separately.

Disposal: P501: Dispose of contents/containers in accordance with all applicable local, state (provincial), and federal regulations.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS: None.

2.4 Additional Information

Primary Routes of Entry:

Skin Contact:	Yes
Skin Absorption:	No
Eye Contact:	Yes
Ingestion:	Yes
Inhalation:	Yes

Emergency Overview: Toxic effects are directly related to corrosivity to eyes, skin and the respiratory tract.

Effects of Short-Term (Acute) Exposure:

Inhalation: Hydrogen peroxide solutions can form a vapour at normal temperatures. Inhalation of mist or vapours may be severely irritating to the nose, throat and respiratory tract. Causes severe respiratory irritation. Vapours may cause pulmonary edema. Toxic effects may be delayed.

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.

Eye Contact: Corrosive. May cause conjunctivitis, corneal burns and permanent damage, including blindness. Symptoms 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. May be fatal if swallowed.

Effects of Long-Term (Chronic) Exposure:

Health concerns are generally related to corrosivity and immediate (acute) health effects. There may be long lasting effects from burns causing scarring.

Medical Conditions Aggravated By Exposure: None known.

3. Composition

3.1 Mixture composition

Component	% (w/w)	GHS Classification
Hydrogen Peroxide CAS No 7722-84-1 EC No 231-765-0	29	Oxidizing Liquid, Category 1, H271 Acute Toxicity, Oral, Category 4, H302 Skin Irritation, Category 1A, H314 Eye Damage/Irritation, Category 1, H318 Specific Target Organ Toxicity, Single Exposure, Category 3, H335 Acute Aquatic Toxicity, Category 3, H402 Chronic Aquatic Toxicity, Category 3, H412
Water CAS No 7732-18-5 EC No 231-791-2	71	No GHS Classification
Undisclosed ingredients or those considered non-hazardous	None	Not applicable

* ACGIH: American Conference of Governmental Industrial Hygienists. Exposure limits may vary from time to time and from one jurisdiction to another. Check with local regulatory agency for the exposure limits in your area.

ABBREVIATION KEY: N/p: not published, N/d: not determined, N/ap: not applicable, N/av: not available

4. First Aid Measures

4.1 Description of First Aid Measures

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.

In case of 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. Remove contacts if present and easy to do. Continue flushing. Have an ophthalmologist make an evaluation of eye injury.

In case of skin contact: Wash affected area immediately with mild soap and water and continue for 15 minutes. If irritation persists, seek immediate medical attention. Remove any contaminated clothing and launder clothing before reuse. Take off immediately all contaminated clothing. Rinse skin with water [or shower].

If inhalation: Remove person to fresh air. If not breathing, give artificial respiration. If breathing is difficult, get immediate medical attention. If breathing has stopped, a trained person should perform artificial respiration.

If ingestion: Call a POISON CENTER/doctor...if you feel unwell. 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.

4.2 Most important symptoms and effects, both acute and delayed

Effects of Short-Term (Acute) Exposure:

Inhalation: Hydrogen peroxide solutions can form a vapour at normal temperatures. Inhalation of mist or vapours may be severely irritating to the nose, throat and respiratory tract. Causes severe respiratory irritation. Vapours may cause pulmonary edema. Toxic effects may be delayed.

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.

Eye Contact: Corrosive. May cause conjunctivitis, corneal burns and permanent damage, including blindness. Symptoms 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. May be fatal if swallowed.

Effects of Long-Term (Chronic) Exposure:

Health concerns are generally related to corrosivity and immediate (acute) health effects. There may be long lasting effects from burns causing scarring.

Medical Conditions Aggravated By Exposure: None known.

4.3 Indication of any immediate medical attention and special treatment needed

In the case of accidental ingestion, it is important to get treatment immediately. May be fatal, if swallowed.

5. Fire Fighting Measures

5.1 Extinguishing Media

Suitable extinguishing media: Use only water spray or appropriate foam. Do NOT use CO₂ on this product.

5.2 Special hazards arising from mixture: 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.

Do not flush into sewers unless concentration is below 1%

Advice for firefighters: Evacuate area and fight fire from a safe distance or a protected location. Stop leak if safe to do so. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Do not enter confined fire space without proper personal protection. Use approved positive pressure self-contained breathing apparatus. If possible, isolate materials not yet involved in the fire, and move containers from fire area if this can be done without risk, and protect personnel. Otherwise, fire-exposed containers or tanks should be cooled by application of hose streams and this should begin as soon as possible and should concentrate on any unwetted portions of the container

5.3 Further Information:

Hazardous Decomposition Products: Oxygen and steam.

Sensitivity to Impact: No
Sensitivity to Static Discharge: No

HAZARDOUS MATERIALS INFORMATION SYSTEM (HMIS) HAZARD INDEX:

HEALTH: 3

CHRONIC: *

FLAMMABILITY: 0

PHYSICAL: 2

NATIONAL FIRE PROTECTION AGENCY (NFPA) INDEX:

HEALTH: 3

FIRE: 0

REACTIVITY: 2

SPECIAL HAZARD: OX

6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

All spill responders involved in a cleanup of this product must follow good industrial hygiene practices. Use personal protective equipment. Avoid breathing vapours, mist or gas. If used indoors, ensure adequate ventilation. Extinguish all sources of ignition. Absorb spilled material on inert absorbent and shovel into approved containers, properly labeled for disposal.

Respiratory Protection: NIOSH recommended respiratory equipment.
Up to 10 ppm: Any air supplies respirator
Up to 25 ppm: Any air supplied respirator operated in a continuous flow Mode
Up to 50 ppm: Any self-contained breathing apparatus with a full face-piece or any supplied-air respirator with a full face-piece.
Up to 75 ppm: Any supplied-air respirator with a full face-piece and is operated in a pressure demand or other positive pressure mode.

Skin protection: Natural rubber gloves, butyl rubber or nitrile gloves provide satisfactory 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.

Eye and Face Protection: Chemical goggles; also wear a face shield if splashing hazard exists. If use may cause splashing or misting, wear chemical goggles or full face protection.

Footwear: No specific recommendation.

Other: None

6.2 Environmental precautions

This product contains hydrogen peroxide which is a Category 3 Acute and Chronic Aquatic Toxicant. Ensure that spilled material does not enter sewers or natural waterways unless concentration is < 1%.

6.3 Methods and materials for containment and cleanup

Immediately remove all sources of heat/ignition. Clean up spills immediately to protect the environment from entry into sewers or water courses. Absorb onto inert material and scoop or shovel up material place in an appropriate, properly labeled container for disposal.

Remedial Measures: Do not use unprotected hands to collect spilled material. Ensure proper protective equipment is used to prevent contact with skin and eyes.

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.

Small Spills: Flush area with water.

6.4 Other information:

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.

6.5 Reference to other sections

For disposal, see Section 13.

7. Handling and Storage

7.1 Precautions for safe handling

Handling Procedures: Keep container tightly closed when not in use. Avoid methods of use that will cause misting of product. Launder clothing before reuse. Wash face and hands thoroughly after handling and before eating, drinking, or using tobacco products. Empty containers may contain hazardous product residues. 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.

7.2 Conditions for safe storage, including incompatibilities

Storage: Keep out of reach of children: 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. Store away from incompatible materials such as iron and other heavy metals, copper alloys, reducing agents, organics and combustibles such as, wood, paper, petroleum products and textiles. See the list of incompatibles in Section 10.

Store in cool, dry place and in an upright position to prevent leakage out of sunlight. Store in original properly vented container.

7.3 Specific end use(s)

No other uses except those mentioned in Section 1.2

8. Exposure Controls, Personal Protection

8.1 Control parameters

Components with workplace control parameters

Hydrogen Peroxide, CAS No 7722-84-1

ACGIH, TLV-TWA: 1.4 mg/m³, 1 ppm

OSHA, TLV-TWA: 1.4 mg/m³, 1 ppm

US IDLH: 75 ppm

NIOSH REL-TWA: 1.4 mg/m³, 1 ppm

* ACGIH: American Conference of Governmental Industrial Hygienists. OSHA: Occupational Safety and Health Administration, NIOSH: National Institute for Occupational Safety and Health. Exposure limits may vary from time to time and from one jurisdiction to another. Check with local regulatory agency for the exposure limits in your area.

8.2 Exposure Controls

Engineering Controls: Under manufacturer's recommended use, no particular engineering controls required. If use causes workplace control parameters to be reached, use adequate ventilation to reduce concentrations in air.

Respiratory Protection: NIOSH recommended respiratory equipment.
Up to 10 ppm: Any air supplies respirator
Up to 25 ppm: Any air supplied respirator operated in a continuous flow Mode
Up to 50 ppm: Any self-contained breathing apparatus with a full face-piece or any supplied-air respirator with a full face-piece.
Up to 75 ppm: Any supplied-air respirator with a full face-piece and is operated in a pressure demand or other positive pressure mode.

Skin protection: Natural rubber gloves, butyl rubber or nitrile gloves provide satisfactory 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.

Eye and Face Protection: Chemical goggles; also wear a face shield if splashing hazard exists. If use may cause splashing or misting, wear chemical goggles or full face protection.

Footwear: No specific recommendation.

Other: Eye wash station should be in the vicinity of use and easily accessible.

Control of environmental exposure: This product contains hydrogen peroxide which is a Category 3 Acute and Chronic Aquatic Toxicant. Ensure that spilled material does not enter sewers or natural waterways unless concentration is < 1%.

9. Physical and Chemical Properties

9.1 Information on basic physical and chemical properties

Note: Typical values are marked *

Appearance:	Clear, colourless liquid
Odour:	Slight acrid
Odour Threshold:	No data available
pH:	<2.0 *
Melting Point/Freezing Point:	No data available
Initial Boiling Point:	No data available
Flash Point:	None
Evaporation Rate:	<1 (n-Butyl acetate=1)
Flammability:	Not flammable
Upper Explosion Limit:	No data available
Lower Explosion Limit:	No data available
Vapour Pressure:	No data available
Vapour Density:	No data available
Relative Density:	1.108 gm/cm ³ (water = 1)
Solubility:	Completely miscible
Partition Coefficient:	No data available
Autoignition Temperature:	No data available
Decomposition Temperature:	Not available
Viscosity:	Not available
Explosive Properties:	Not available
Oxidizing Properties:	Strong oxidizer
Percent Volatiles:	100% by volume

9.2 Other safety information: None

10. Stability and Reactivity

10.1 Reactivity

Under recommended storage conditions, slow decomposition may occur releasing oxygen gas.

10.2 Chemical Stability

Stable under recommended storage conditions. Storage should be in a dry, clean area away from incompatible materials, sources of ignition and heat. Store away from sunlight.

10.3 Possibility of hazardous reactions

No data available

10.4 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. Heat, sparks, flames, sources of ignition which may initiate burning. Keep away from incompatible materials.

10.5 Incompatible materials

Metals. Reducing agents, alkalis, combustible material, organic materials, and heavy metals and their salts

10.6 Hazardous decomposition products

Oxygen and steam

11. Toxicological Information

11.1 Information on toxicological effects

Acute toxicity

Acute Toxicity, Oral, Category 4, H302: Harmful if swallowed.

Skin corrosion/irritation

Skin Corrosion, Category 1A, H314: Causes severe skin burns and eye damage

Serious eye damage/eye irritation

Eye Damage/Irritation, Category 1, H318: Causes serious eye damage

Respiratory or skin sensitization

No GHS classification

Germ Cell Mutagenicity

No GHS classification

Carcinogenicity

No GHS classification

Reproductive toxicity

No GHS classification

Specific Target Organ Toxicity – Single exposure

Specific Target Organ Toxicity- Single Exposure, Category 3, Respiratory Tract: H335: May cause respiratory irritation

Specific Target Organ Toxicity – Repeated exposure

No GHS classification

Aspiration Hazard

No GHS classification

Aquatic Toxicity

Acute Aquatic Toxicity, Category 3, H402: Harmful to aquatic life

Chronic Aquatic Toxicity, Category 3, H412: Harmful to aquatic life with long lasting effects

Additional information

Relevant toxicity data:

Component	LD ₅₀	LC ₅₀
Hydrogen Peroxide CAS No 7722-84-1	>2000 mg/kg (oral/mouse) 90% sol'n 801 mg/kg (oral/female rat) 60% sol'n 1193 mg/kg (oral/male rat) 35% sol'n >6500 mg/kg (dermal/rabbit) 70% sol'n	>0.17 mg/l (inhalation/rat, 4 hour) 50% sol'n

12. Ecological Information

12.1 Toxicity

Hydrogen Peroxide, CAS No 7722-84-1

Aquatic, Acute Aquatic Toxicity, Category 3

Aquatic, Chronic Aquatic Toxicity, Category 3

Ecotoxicity Fish Species: LC₅₀ (48 hr) carp: 42 mg/l
LC₅₀ (96 hr)(species not available): 37.4 mg/l

Acute/Crustaceans: EC₅₀ (24 hr) Daphnia: 7.7 mg/l

Ecotoxicity Freshwater Algae: NOEC (72 hr) 0.1 mg/l

12.2 Persistence and degradability

Hydrogen peroxide quickly decomposes to oxygen and water.

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

Not conducted

12.6 Other adverse effects

No data available

13. Disposal Considerations

13.1 Waste treatment methods

Product:

Dispose of product according to all applicable local, state (provincial), and federal regulations. Offer to a licensed disposal company, properly contained and labeled.

Contaminated Packaging:

As above. Ensure all packagings are leakproof, vented and properly labeled.

14. Transport Information

Transport of Dangerous Goods (TDG and CLR): UN 2014, HYDROGEN PEROXIDE, AQUEOUS SOLUTION, Class 5.1 (8), PG II

United States Department of Transport (49CFR): UN 2014, Hydrogen Peroxide, Aqueous Solution, Class 5.1 (8), PG II

International Air Transport Association (IATA): UN 2014, Hydrogen Peroxide, Aqueous Solution, Class 5.1 (8), PG II

International Maritime Organization (IMO): UN 2014, Hydrogen Peroxide, Aqueous Solution, Class 5.1 (8), PG II, EmS No F-H, S-Q, Stowage Category "D", Shaded from radiant heat. Separated from permanganates and Class 4.1

15. Regulatory Information

CANADIAN FEDERAL REGULATIONS:

CEPA, DOMESTIC SUBSTANCES LIST: Listed

AMERICAN FEDERAL REGULATIONS:

TSCA: (Toxic Substance Control Act): Listed

SARA 302 Extremely hazardous substance: Hydrogen Peroxide CAS No 7722-84-1
Rev Date 1993-04-24

SARA 311/312 Hazardous chemical: Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard

SARA 313 (TRI reporting): This product does not contain ingredients with known CAS numbers that exceed the threshold (De Minimis) reporting levels required by this regulation.

Other State Regulations:

Massachusetts Right to Know Components:

Hydrogen Peroxide, CAS No 7722-84-1 Rev Date 1993-04-24

Pennsylvania Right to Know Components:

Hydrogen Peroxide, CAS No 7722-84-1 Rev Date 1993-04-24

Water, CAS No 7732-18-5

New Jersey Right to Know Components:

Hydrogen Peroxide, CAS No 7722-84-1 Rev Date 1993-04-24

Water, CAS No 7732-18-5

California Prop 65 Components: This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

OTHER:

None

16. Other Information

Original Preparation Date: August 8, 2017

Prepared by: K.J. Pearson, BC Hazmat Management Ltd., 6 – 10114 McDonald Park Road, Sidney, B.C., V8L 5X8

Disclaimer: This Safety Data Sheet (SDS) was prepared using information provided by CCINFO, ingredient supplier SDS and other relevant sources. This product has been classified using weight of evidence, expert judgment and previous testing as per Part 1.3 of the Fifth Edition of The Globally Harmonized System of Classification and Labeling of Chemicals (GHS). The information in this SDS is offered for your consideration and guidance when exposed to this product. Nutrilife Plant Products expressly disclaims all expressed or implied warranties and assumes no responsibilities for the accuracy or completeness of the data contained herein. The data in this SDS does not apply to use with any other product or in any other process.

This Safety Data Sheet may not be changed, or altered in any way without the expressed knowledge and permission of Nutrilife Plant Products.

Revisions: August 10, 2018: Moved toxicity data from Section 3 to Section 11; removed workplace exposure data from Section 3.

Updated classification data.