Safety Data Sheet

Hydrogen Peroxide 30%

SECTION 1: Identification

1.1 GHS Product identifier

Product name	Hydrogen Peroxide 30%
Substance name	Hydrogen peroxide
EC no.	231-765-0
CAS no.	7722-84-1
Index no.	008-003-00-9

1.2 Other means of identification

Peroxide, Hydrogen dioxide, Hydroperoxide

1.3 Recommended use of the chemical and restrictions on use

For laboratory and manufacturing use only.

1.4 Supplier's details

Name	High Purity Products
Address	14546 N. Lombard Street Portland OR 97203 United States of America
Telephone	503-227-1616
email	help.desk@highpp.com

1.5 Emergency phone number

CHEMTREC: 1-800-424-9300

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

GHS classification in accordance with: (US) OSHA (29 CFR 1910.1200)

- Skin corrosion/irritation, Cat. 1B
- Eye damage/irritation, Cat. 1
- Acute toxicity, inhalation, Cat. 4

- Specific target organ toxicity (single exposure), Cat. 3

2.2 GHS label elements, including precautionary statements

Pictogram

Signal word **Danger**

Hazard statement(s)

H314	Causes severe skin burns and eye damage
H318	Causes serious eye damage
H332	Harmful if inhaled
H335	May cause respiratory irritation

Precautionary statement(s)

P210	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P221	Take any precaution to avoid mixing with combustibles
P260	Do not breathe mist/vapors/spray.
P264	Wash thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
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/shower.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several 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.
P312	Call a POISON CENTER if you feel unwell.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.

SECTION 3: Composition/information on ingredients

3.1 Substances

Component	CAS #	Concentration
Hydrogen Peroxide	7722-84-1	28 - 32 % (weight)
Water	7732-18-5	68 - 72 % (weight)

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

General advice	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled	Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell.

	Acute and delayed symptoms and effects: May cause respiratory irritation. Signs/symptoms may include burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema.
In case of skin contact	Take off immediately all contaminated clothing. Rinse skin with water/shower for at least 15 minutes. Call a poison center or doctor if irritation develops or persists. Wash contaminated clothing before reuse.
	Acute and delayed symptoms and effects: Causes severe skin burns. Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.
	Wash with plenty of water for at least 15 minutes. Call a poison center or doctor if irritation develops or persists. Take off contaminated clothing and wash it before reuse.
In case of eye contact	Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center or doctor.
If swallowed	Rinse mouth. Do not induce vomiting. If conscious, give 2 glasses of water. Get immediate medical attention. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms/effects, acute and delayed
Large doses of this compound presumably produce esophagitis and gastritis. Rupture of the colon, proctitis, and ulcerative colitis have occurred following H2O2 enemas.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media
Water. Do not use any other substance.

5.2 Specific hazards arising from the chemical
In closed unventilated containers, risk of rupture due to the increased pressure from decomposition. Contact with combustible material may cause fire

5.3 Special protective actions for fire-fighters
Use water spray to cool fire exposed surfaces and protect personnel. Move containers from fire area if you can do it without risk. As in any fire, wear self-contained breathing apparatus and full protective gear.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
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.

6.2 Environmental precautions
Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up
Dike to collect large liquid spills. Stop leak and contain spill if this can be done safely. Small spillage: Dilute with large quantities of water.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Do not swallow. Do not breathe mist, vapors, or spray. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition.

7.2 Conditions for safe storage, including any incompatibilities

Store locked up. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store away from incompatible materials. See Section 10 for information on Incompatible Materials. Keep out of the reach of children.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Component	CAS #	NIOSH REL
Hydrogen Peroxide	7722-84-1	TLV 1 ppm

8.2 Appropriate engineering controls

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

8.3 Individual protection measures, such as personal protective equipment (PPE)

Pictograms

Eye/face protection

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

Skin protection

Wear protective gloves. Consult manufacturer specifications for further information.

Body protection

Wear protective clothing. Clothing with full length sleeves and pants should be worn. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multipurpose combination respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH.

SECTION 9: Physical and chemical properties and safety characteristics

Physical state	Liquid
Appearance	Clear, liquid
Color	Colorless
Odor	Slightly acrid odor
Odor threshold	No data available.
pH	4.7

Melting point/freezing point	-25.7 °C
Boiling point or initial boiling point and boiling range	106.2 °C
Flash point	Not Flammable
Evaporation rate	> 1 (n-butyl acetate =1)
Flammability	Not Flammable
Lower and upper explosion limit/flammability limit	No data available.
Vapor pressure	1.5 mm Hg @ 20 °C (Est.)
Relative vapor density	1.17
Density and/or relative density	1.110
Solubility	completely soluble
Partition coefficient n-octanol/water (log value)	-1.5
Auto-ignition temperature	No data available.
Decomposition temperature	>= 60 °C
Kinematic viscosity	0.98 mm^2/s (0.98 centistokes) at 20 °C (35% or 50%)
Explosive properties	Explosive decomposition may occur under fire conditions.
Oxidizing properties	Strong oxidizer

Particle characteristics
No data available.

SECTION 10: Stability and reactivity

10.1 Reactivity
Contact with incompatible materials. Sources of ignition. Exposure to heat.

10.2 Chemical stability
Stable under normal storage conditions.

10.3 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.

10.4 Conditions to avoid
Heat, flames and sparks. Incompatible products. Keep away from open flames, hot surfaces and sources of ignition.

10.5 Incompatible materials
Avoid contact with 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.

10.6 Hazardous decomposition products
Decomposition releases large quantities of oxygen and steam, which may cause containers to rupture and intensify a fire.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
LD50 – oral – rat – 1193 mg/kg (35% solution)
LC50 – inhalation – mouse - 9400 mg/m^3/5-15 mins

Skin corrosion/irritation
Causes severe skin burns.

Serious eye damage/irritation
Corrosive. Risk of serious damage to eyes.

Respiratory or skin sensitization
No data available

Germ cell mutagenicity
This product is not recognized as mutagenic by Research Agencies in vivo tests did not show mutagenic effects

Carcinogenicity
Hydrogen peroxide is not classifiable as to its carcinogenicity to humans.

Reproductive toxicity
No toxicity to reproduction in animal studies.

STOT-single exposure
May cause respiratory irritation.

Target Organs: lungs, intestine, thymus, liver, and kidney

STOT-repeated exposure
No data available.

Aspiration hazard
No data available.

SECTION 12: Ecological information

Toxicity
LD50; Species: Anas platyrhynchos (Mallard Duck) age 16 wk; oral via capsule 1049 mg/kg (95% confidence interval: 830-1332 mg/kg) /35% purity
LC50; Species: Anas platyrhynchos (Mallard Duck) age 5 days; dietary >5000 ppm for 8 days /35% purity
LC50; Species: Colinus virginianus (Northern Bobwhite Quail) age 11 days; dietary >5000 ppm for 8 days /35% purity

Persistence and degradability
Hydrogen peroxide in the aquatic environment is subject to various reduction or oxidation processes and decomposes into water and oxygen. Hydrogen peroxide half-life in freshwater ranged from 8 hours to 20 days, in air from 10 - 20 hours, and in soils from minutes to hours depending upon microbiological activity and metal contamination.

Bioaccumulative potential
Material may have some potential to bioaccumulate but will likely degrade in most environments before accumulation can occur.

Mobility in soil
Will likely be mobile in the environment due to its water solubility but will likely degrade over time.

SECTION 13: Disposal considerations

Disposal methods
Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.
EPA Waste Code: **D001**

SECTION 14: Transport information

DOT (US)
UN Number: UN2014
Class: 5.1 (8)
Packing Group: II
Proper Shipping Name: Hydrogen peroxide, aqueous solutions, (with 30-32% Hydrogen Peroxide)

IMDG
UN Number: UN2014
Class: 5.1 (8)
Packing Group: II
Proper Shipping Name: Hydrogen peroxide, aqueous solutions, (with 30-32% Hydrogen Peroxide)

IATA
UN Number: UN2014
Class: 5.1 (8)
Packing Group: II
Proper Shipping Name: Hydrogen peroxide, aqueous solutions, (with 30-32% Hydrogen Peroxide)

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

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

Canadian Domestic Substances List (DSL)
Chemical name: Hydrogen peroxide (H2O2)
CAS: 7722-84-1

Massachusetts Right To Know Components
Hydrogen peroxide
CAS number: 7722-84-1

SARA 311/312 Hazards
Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard

Pennsylvania Right To Know Components
Water
CAS-number: 7732-18-5
Hydrogen peroxide
CAS number: 7722-84-1

New Jersey Right To Know Components
Water
CAS-number: 7732-18-5
Hydrogen peroxide
CAS number: 7722-84-1

HMIS Rating

Hydrogen Peroxide 30%	
HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	1
PERSONAL PROTECTION	

NFPA Rating

SECTION 16: Other information

Disclaimer:

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