

Safety Data Sheet
Hydrogen Peroxide, 34 - 35%

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

1.1 Product identifier

Product name: Hydrogen Peroxide, 34 - 35%

Synonym(s): Dihydrogen dioxide; Hydrogen peroxide, solution; Hydroperoxide

1.2 Relevant identified uses of the substance or mixture and uses advised against

General use: Industrial and laboratory applications

Uses advised against: None known

1.3 Details of the supplier and of the safety data sheet

Manufacturer/Distributor

Silver Fern Chemical, Inc.

121 W. De La Guerra Street, Suite B

Santa Barbara, CA 93101 USA

Ph: 1-866-282-3384; Website - www.silverfernchemical.com; Email - info@silverfernchemical.com

1.4 24 hour emergency telephone number

+1-800-535-5053; Outside USA & Canada +1-352-323-3500

SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification of substance or mixture

Product definition: Mixture

Classification in accordance with 29 CFR 1910 (OSHA HCS) and Regulation EC No. 1272/2008

Acute Toxicity, Oral - Category 4 [H302]

Skin Irritation - Category 2 [H315]

Eye Damage - Category 1 [H318]

Specific Target Organ Toxicity - Single Exposure - Category 3; STOT SE 3 [H335]

2.2 Label elements

Hazard symbol(s):



GHS05



GHS07

Signal word: Danger

Hazard statement(s): H302 - Harmful if swallowed
H315 - Causes skin irritation
H318 - Causes serious eye irritation
H335 - May cause respiratory irritation

Precautionary statements:

[Prevention]

P261 - Avoid breathing mist and vapors.
P264 - Wash hands and other exposed skin areas thoroughly after handling.
P270 - Do not eat, drink or smoke when using this product.
P271 - Use only outdoors or in a well-ventilated area.

[Response]

P280 - Wear protective gloves, protective clothing and eye protection.
P301 + P330 + P312 - IF SWALLOWED: Rinse mouth. Call a POISON CENTER or doctor if you feel unwell.
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 + P312 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if the victim feels unwell.
P305 + P351 + P338 + P310 - 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.
P321 - Specific treatment: Call a POISON CENTER or doctor for advice. Refer to Section 4 of this SDS.

[Storage]

P332 + P313 - If skin irritation occurs: Get medical attention.

[Disposal]

P362 - Take off contaminated clothing and wash before reuse.
P405 + P403 + P233 - Store locked up in a well-ventilated place. Keep container tightly closed.
P501 - Dispose of contents and containers in accordance with national and local regulations.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

None as defined under 29 CFR 1910.1200.

SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Not applicable

3.2 Mixtures

% by Weight	Ingredient	CAS Number	EC Number	Index Number	GHS Classification
32 - 36	Hydrogen Peroxide	7722-84-1	231-765-0	607-428-00-2	H271, H302, H314, H332

There are no additional ingredients present in this product which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

SECTION 4 – FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation: If product mist or vapor causes respiratory irritation or distress, move the exposed person to fresh air immediately. If breathing is difficult or irregular, administer oxygen; if respiratory arrest occurs, start artificial respiration by trained personnel. Do not use mouth-to-mouth method if victim inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If unconscious, maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. Seek medical attention if symptoms persist or if the victim feels unwell.

Eyes: Immediately flush eyes with large amounts of water or saline solution for at least 15 minutes, occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do after first 2 minutes and continue rinsing. Seek immediate medical attention, preferably from an ophthalmologist.

Skin: Flush skin with large amounts of water while removing contaminated clothing. Wash the affected area with soap and water followed by thorough rinsing. Wash contaminated clothing and shoes before reuse. If irritation persists or in case of chemical burns, seek medical attention.

Ingestion: Rinse mouth with water if the victim is conscious. Remove dentures if present. DO NOT induce vomiting. Give 1 - 2 cupfuls of water to drink if the victim is conscious, alert, able to swallow and is not experiencing respiratory distress. Never give anything by mouth to a convulsing or unconscious person. Do not leave the victim unattended. Seek immediate medical attention.

4.2 Most important symptoms and effects, both acute and delayed

Potential health symptoms and effects

Eyes: Causes severe eye irritation and serious eye damage. Symptoms may include redness, swelling, pain, tearing, blurred vision and burns. May cause chemical conjunctivitis and corneal damage. Vapor or mist can cause eye irritation.

Skin: Causes skin irritation and possible burns. Symptoms may include redness, discomfort, itching, swelling, blisters and burns. May cause discoloration of the skin. Prolonged and repeated contact with unprotected skin may cause dermatitis.

Inhalation: Causes irritation of the respiratory tract with headache, sore throat, cough and shortness of breath. May cause chemical burns to the respiratory tract. At high concentrations respiratory effects may include acute lung damage and delayed pulmonary edema.

Ingestion: Harmful if swallowed. Causes irritation of the digestive tract with bloating, nausea, vomiting, abdominal pain and diarrhea. Causes burns to the gastrointestinal tract. May cause damage to the vascular system and damage to the red blood cells. May cause difficulty in swallowing, stomach distension, possible cerebral swelling and death. May cause bleeding of the stomach and ulcer formation.

Chronic: Prolonged and repeated skin contact may cause dermatitis. Laboratory experiments have resulted in mutagenic effects. Hydrogen peroxide is a confirmed animal carcinogen with unknown relevance to humans. Refer to Section 11.2.

4.3 Indication of any immediate medical attention and special treatment needed

Advice to doctor and hospital personnel

Treat symptomatically and supportively. Exposure to 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 – FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable methods of extinction: Use extinguishing media such as water spray or fog, carbon dioxide, foam and dry chemical.

Unsuitable methods of extinction: None known

5.2 Special hazards arising from the substance or mixture

Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Product is not combustible; however, it is an oxidizer and its heat of reaction with reducing agents or combustible materials may cause ignition. Releases oxygen upon decomposition, which enhances combustion. Closed containers may explode due to the buildup of pressure when exposed to extreme heat. During emergency conditions overexposure to decomposition products may cause a health hazard. Symptoms may not be immediately apparent or may be delayed. Obtain medical attention.

Explosion hazards: Avoid hot surfaces, high temperatures and sources of ignition. Risk of explosion if heated under confinement.

5.3 Advice to firefighters

Full protective equipment including self-contained breathing apparatus should be used. Water may be used to cool closed containers to prevent pressure buildup and possible autoignition or explosion when exposed to extreme heat. If possible, firefighters should control runoff water to prevent environmental contamination.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Evacuate non-essential personnel. Wear appropriate protective clothing and equipment designated in Section 8.2. Ventilate the area. Remove all sources of ignition. NO SMOKING. Clean up spills immediately. Spill creates a slip hazard.

6.2 Environmental precautions

Avoid dispersal of spilled material or runoff and prevent contact with soil and entry into drains, sewers or waterways. Use water sparingly to minimize environmental contamination and reduce disposal requirements.

6.3 Methods and materials for containment and cleaning up

Approach spill from upwind direction. DO NOT flush spill down the drain. Cover drains and contain spill. Cover spill with a large quantity of inert absorbent. Do not use combustible material such as sawdust. Collect material using non-sparking tools and place into an approved container for proper disposal. Observe possible material restrictions (Sections 7.2 and 10.5). Do not allow material or runoff from rinsing contaminated areas to enter floor drains or storm drains and ditches that lead to waterways. Dispose of via a licensed waste disposal contractor.

6.4 Reference to other sections

For indications about waste treatment, see Section 13.

SECTION 7 – STORAGE AND HANDLING

7.1 Precautions for safe handling

Wear all appropriate personal protective equipment specified in Section 8.2. Do not get in eyes or on skin or clothing. Do not inhale mist. NO SMOKING. If normal use of material presents a respiratory hazard, use only adequate ventilation or wear an appropriate respirator. Open containers slowly to control possible pressure release. Wash contaminated clothing and shoes thoroughly before reuse.

Advice on protection against fire and explosion

Keep away from heat and sources of ignition. Keep away from combustible, organic and incompatible materials. This substance releases oxygen upon decomposition, which intensifies fire.

7.2 Conditions for safe storage, including any incompatibilities

Store in dry, cool, well-ventilated areas away from combustible and incompatible materials (see Section 10.5), food and drink. Do not store on wood floors. Keep away from heat and ignition sources. Store away from acids, alkalis, reducing agents, organic materials and metal oxides. Do not store in of direct sunlight. Contents may develop pressure in unvented containers upon prolonged storage. Transfer only to approved containers having correct labeling. Keep containers tightly closed when not in use. Protect containers against physical damage. Containers that have been opened must be carefully resealed and kept upright to prevent spillage. Containers are hazardous when empty as they contain product residues. Use appropriate containment to environmental contamination. Ventilate closed areas. Keep out of reach of children.

7.3 Specific end uses

Apart from the uses mentioned in Section 1.2, no other specific uses are stipulated.

SECTION 8 – EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Occupational exposure limit values

CAS Number	Ingredient	OSHA PEL	ACGIH TLV	NIOSH
7722-84-1	Hydrogen Peroxide	1 ppm; 1.4 mg/m ³ TWA	1 ppm; 1.4 mg/m ³ TWA	1 ppm; 1.4 mg/m ³ TWA 75 ppm IDLH

8.2 Exposure controls

Engineering measures: Technical measures and appropriate working operations should be given priority over the use of personal protective equipment. Use adequate ventilation. Local exhaust is preferable. Refer to Section 7.1.

Individual protection measures: Wear protective clothing to prevent repeated or prolonged contact with product. Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the representative supplier.

Hygiene measures: Facilities storing or using this material should be equipped with an eyewash station and safety shower. Change contaminated clothing. Preventive skin protection is recommended. Wash hands thoroughly after use, before eating, drinking, smoking or using the lavatory.

Eye/face protection: Wear protective splash goggles or safety glasses with unperforated side shields and a face shield during use.

Hand protection: Wear Neoprene or butyl rubber gloves or those recommended by glove supplier for protection against materials in Section 3. Gloves should be impermeable to chemicals and oil. Breakthrough time of selected gloves must be greater than the intended use period.

Skin protection: Wear protective clothing. Wear protective boots if the situation requires.

Respiratory protection: Always use an approved respirator when vapor/aerosols exceed permissible exposure limits. Where risk assessment shows air-purifying respirators are appropriate use a half-mask respirator with multi-purpose combination (US) or type ABEK (EN 14387) 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 (US) or CEN (EU). Follow OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149.

Environmental exposure controls: Do not empty into drains.

PPE must not be considered a long-term solution to exposure control. PPE usage must be accompanied by employer programs to properly select, maintain, clean fit and use. Consult a competent industrial hygiene resource to determine hazard potential and/or the PPE manufacturers to ensure adequate protection.



* It is recommended that a face shield be worn with splash goggles when handling this product.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Appearance	Clear, colorless liquid
Odor	Odorless
Odor Threshold	Not applicable
Molecular Weight	34.01 g/mol
Chemical Formula	H ₂ O ₂
pH	No data available
Freezing/Melting Point	- 33 °C (- 27 °F)
Boiling Point Range	108 °C (226.4 °F)
Evaporation Rate	> 1 [n-BuOAc = 1]
Flammability (solid, gas)	Not applicable
Flash Point	Not flammable
Autoignition Temperature	Not applicable
Decomposition Temperature	100 °C (212 °F)
Lower Explosive Limit (LEL)	No data available
Upper Explosive Limit (UEL)	No data available
Vapor Pressure	24 mm Hg @ 30 °C
Vapor Density	No data available
Specific Gravity	1.13 @ 20 °C
Viscosity	1.06 cPs @ 20 °C
Solubility in Water	Completely soluble
Partition Coefficient (n-octanol/water)	log P _{ow} = - 1.5 @ 20 °C
Oxidizing Properties	Oxidizer
Explosive Properties	Not applicable
Volatiles by Weight @ 21 °C	100%

9.2 Other Data

No data available

SECTION 10 – STABILITY AND REACTIVITY

10.1 Reactivity

This material is stable under normal handling conditions and use.

10.2 Chemical Stability

This material is chemically stable under normal and anticipated storage, handling and processing conditions. Decomposes slowly to release oxygen. Unstable when heated or contaminated with heavy metals, reducing agents, rust, dirt or organic materials. Stability is reduced when pH is above 4.0.

10.3 Possibility of hazardous reactions

Hazardous polymerization will not occur.

10.4 Conditions to avoid

High temperatures, hot surfaces, contact with incompatible materials

10.5 Incompatible materials

Strong reducing agents, alkaline materials, metals, metallic oxides, organic materials, flammable and combustible materials, dusts

10.6 Hazardous decomposition products

Thermal decomposition products include oxygen and hydrogen gas.

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute oral toxicity

LD₅₀, rat: 1,200 mg/kg (35% aqueous solution)

Acute inhalation toxicity

LC₅₀, rat: 0.17 mg/l, 4 h (50% saturated vapor); no deaths

Acute dermal toxicity

LD₅₀, rabbit: > 2,000 mg/kg (35% aqueous solution)

Skin irritation

Causes skin irritation and possible burns.

Eye irritation

Causes serious eye damage.

Sensitization

No data available

Carcinogenicity

No data available

Germ cell mutagenicity

No data available

Reproductive toxicity

No data available

Specific organ toxicity - single exposure

May cause respiratory irritation.

Specific organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Further information

Hydrogen Peroxide (CAS #7722-84-1): IARC Group 3 carcinogen - *Not classifiable as to its carcinogenicity to humans*; ACGIH A3 carcinogen - *Confirmed animal carcinogen with unknown relevance to humans*. Not listed as a carcinogen by NTP or OSHA. Laboratory experiments with animal test subjects have resulted in mutagenic effects.

Handle in accordance with good industrial hygiene and safety practice.

SECTION 12 - ECOLOGICAL INFORMATION

12.1 Toxicity

This substance is harmful to aquatic life with long lasting effects.

Acute toxicity to fish:

LC₅₀ - Cyprinus carpio (Carp), 48 h: 42 mg/l

LC₅₀ - Pimephales promelas (Fathead minnow), 96 h: 16.4 mg/l

Acute toxicity to aquatic invertebrates:

EC₅₀ - Daphnia pulex (Water flea), 48 h: 2.4 mg/l

Acute toxicity to aquatic plants:

ErC₅₀ - Skeletonema costatum (marine diatom), 72 h: 1.38 mg/l

Acute toxicity to bacteria:

EC₅₀ - Activated sludge, 0.5 h: 466 mg/l.

12.2 Persistence and degradability

Inorganic substances are not biodegradable. Methods for the determination of biodegradability are not applicable to inorganic substances.

12.3 Bioaccumulation potential

This substance will not bioaccumulate.

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance is not persistent, bioaccumulative and toxic (PBT) and not very persistent and very bioaccumulative (vPvB).

12.6 Other effects**Additional ecological information**

Do not allow material to run into surface waters, wastewater or soil.

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Methods of disposal: The generation of waste should be avoided or minimized whenever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

RCRA F-Series: No listings above the reportable threshold (de minimis)

RCRA U-Series: No listings above the reportable threshold (de minimis)

SECTION 14 – TRANSPORTATION INFORMATION

Note: Transportation information provided is for reference only. Customer is urged to consult 49 CFR 100 - 177, IMDG, IATA, EC, United Nations TDG and WHMIS (Canada) TDG information manuals for detailed regulations and exceptions covering specific container sizes, packaging materials and methods of shipping.

USA DOT (Ground Transportation) - Bulk and Non-bulk

Proper Shipping Name	Hydrogen peroxide, aqueous solutions with not less than 20 % but not more than 40% hydrogen peroxide
Hazard Class	5.1, 8
UN	UN2014
Packing Group	II
NAREG	Guide #140
Packaging Authorization	Non-Bulk: 49 CFR 173.202; Bulk: 173.243
Packaging Exceptions	NONE

IMO/IMDG (Water Transportation)

Proper Shipping Name	Hydrogen peroxide, aqueous solutions with not less than 20 % but not more than 40% hydrogen peroxide
Hazard Class	5.1, 8
UN	UN2014
Packing Group	II
Marine Pollutant	No
EMS Number	F-H, S-Q

ICAO/IATA (Air Transportation)

Proper Shipping Name	Hydrogen peroxide, aqueous solutions with not less than 20 % but not more than 40% hydrogen peroxide
Hazard Class	5.1, 8
UN	UN2014
Packing Group	II
Quantity Limitations	49 CFR 175.27 and 175.75 - Cargo Aircraft Only: 5 l; Passenger Aircraft: 1 l
Note:	Air regulation permits shipment of Hydrogen Peroxide ($\leq 40\%$) in non-vented containers for Air Cargo Only aircraft, as well as for Passenger and Cargo aircraft. IATA air regulations state that <i>venting of packages containing oxidizing substances is not permitted for air transport.</i>

RID/ADR (Rail Transportation)

Proper Shipping Name	Hydrogen peroxide, aqueous solutions with not less than 20 % but not more than 40% hydrogen peroxide
Hazard Class	5.1, 8
UN	UN2014
Packing Group	II

Drum Label(s)



SECTION 15 - REGULATORY INFORMATION

15.1 Safety, health and environmental regulations/legislation specific for substance or mixture

U. S. Federal Regulations

OSHA Hazard Communication Standard: This material is classified as hazardous in accordance with OSHA 29 CFR 1910-1200.

OSHA Process Safety Management Standard: This product is not regulated under OSHA PSM Standard 29 CFR 1910.119.

EPA Risk Management Planning Standard: This product is not regulated under EPA RMP Standard (RMP) 40 CFR Part 68.

EPA Federal Insecticide, Fungicide and Rodenticide Act: This product is not a registered Pesticide under the FIFRA, 40 CFR Part 150.

Toxic Substance Control Act (TSCA) Inventory: All substances in this product are listed on the TSCA Inventory. This product is not subject to TSCA 12(b) Export Notification.

Drug Enforcement Administration (DEA) List 2, Essential Chemicals (21 CFR 1310.02(b)) and 1310.4(f)(2)) and Chemical Code Number
No listings

Drug Enforcement Administration (DEA) Lists 1 & 2, Exempt Chemical Mixtures (21 CFR 1310.12(c)) and Code Number: No listings

Department of Homeland Security (DHS) Chemical Facility Anti-Terrorism Standards (CFATS) Chemicals

Hydrogen Peroxide (CAS # 7722-84-1) - concentrations of 35% or greater

Superfund Amendments and Reauthorization Act (SARA)

SARA Section 311/312 Hazard Categories

May intensify fire; oxidizer	Harmful if swallowed	Causes skin irritation and serious eye irritation	May cause respiratory irritation
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SARA 313 Information: None of the components of the product exceed the threshold (de minimis) reporting requirements of Section 313 of the Emergency Planning and Community Right-to Know Act of 1986.

SARA 302/304 Extremely Hazardous Substance: None of the components of the product exceed the threshold (de minimis) reporting levels established by these sections of Title III of SARA.

SARA 302/304 Emergency Planning & Notification: None of the components of the product exceed the threshold (de minimis) reporting levels established by these sections of Title III of SARA.

Comprehensive Response Compensation and Liability Act (CERCLA): This product contains no CERCLA reportable substances.

Clean Air Act (CAA)

This product does not contain Hazardous Air Pollutants (HAPs) designated in CAA Section 112 (b).

This product does not contain Class 1 Ozone depleters.

This product does not contain Class 2 Ozone depleters.

Clean Water Act (CWA)

This product does not contain Hazardous Substances.

This product does not contain Priority Pollutants.

This product does not contain Toxic Pollutants.

U.S. State Regulations

California Prop 65, Safe Drinking Water and Toxic Enforcement Act of 1986

This product contains no chemical(s) known to the state of California to cause cancer birth defects or reproductive harm in concentrations that exceed the threshold (de minimis) reporting levels established under Proposition 65.

Other U.S. State Inventories

Hydrogen Peroxide (CAS #7722-84-1) is listed on the following State Hazardous Substance Inventories, Right-to-Know lists and/or Air Quality/Air Pollutants lists: CA, DE, ID, MA, MN, NJ, NY, PA, RI, WA, WI.

Canada

WHMIS Hazard Classification

May intensify fire; oxidizer Harmful if swallowed Causes skin irritation and serious eye irritation May cause respiratory irritation

Canadian National Pollutant Release Inventory (NPRI): None of the components of this product are listed on the NPRI.

European Economic Community

WGK, Germany (Water danger/protection): 1 (slightly hazardous to water)

Global Chemical Inventory Lists

Country	Inventory Name	Listed
Canada	Domestic Substance List (DSL)	Yes
Canada	Non-Domestic Substance List (NDSL)	No
Europe	Inventory of New and Existing Chemicals (EINECS)	Yes
United States	Toxic Substance Control Act (TSCA)	Yes
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
New Zealand	New Zealand Inventory of Chemicals (NZIoC)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (KECI)	Yes
Philippines	Philippines Inventory of Chemicals and Chemical Substances (PICCS)	Yes

*Yes - All components of this product comply with the inventory requirements administered by the governing country.

No - One or more components of this product are not on the inventory or are exempt from listing.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out.

SECTION 16 - OTHER INFORMATION

Hazardous Material Information System (HMIS)

HEALTH	3
FLAMMABILITY	0
PHYSICAL HAZARD	1
PERSONAL PROTECTION	C

C = safety glasses, gloves & apron

HMIS Hazard Rating Legend

0 = Minimal 1 = Slight 2 = Moderate

3 = Serious 4 = Severe

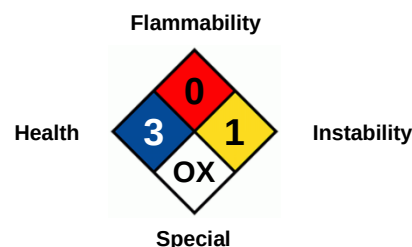
* = Chronic Health Hazard

NFPA Hazard Rating Legend

0 = Insignificant 1 = Slight 2 = Moderate

3 = High 4 = Extreme

National Fire Protection Association (NFPA)



Full Text of GHS Hazard Phrases Referenced in Section 3 (not covered in Section 2)

H271 - May cause fire or explosion; strong oxidizer

H314 - Causes severe skin burns and eye damage

H332 - Harmful if inhaled

Abbreviation Key

ACGIH	American Conference of Governmental Industrial Hygienists	LD_{Lo}	Lowest Lethal Dose
ADR	Accord Dangereux Routier (European regulations concerning the international transport of dangerous goods by road)	mppcf	Millions of Particles Per Cubic Foot
CAS	Chemical Abstract Services	NA	North America
CFR	Code of Federal Regulations	NAERG	North American Emergency Response Guide Book
COC	Cleveland Open Cup	NIOSH	National Institute for Occupational Safety & Health
DOT	Department of Transportation	NTP	National Toxicology Program
EC₅₀	Half maximal effective concentration	OSHA	Occupational Safety and Health Administration
EMS	Emergency Response Procedures for Ships Carrying	PBT	Persistent, Bioaccumulating and Toxic
EPA	Environmental Protection Agency	PEL	Permissible exposure limit
ErC₅₀	Reduction of Growth Rate	PMCC	Pensky-Martens Closed Cup
ERG	Emergency Response Guide Book	ppm	Parts Per Million
FDA	Food and Drug Administration	RCRA	Resource Conservation and Recovery Act
GHS	Globally Harmonized System of Classification and Labelling of Chemicals (GHS)	RID	Dangerous Goods by Rail
HCS	Hazard Communication Standard	RQ	Reportable Quantity
IARC	International Agency for Research on Cancer	TCC/Tag	Tagliabue Closed Cup
IATA	International Air Transport Association	TLV	Threshold Limit Value
IC₅₀	Half Maximal Inhibitory Concentration	TSCA	Toxic Substance Control Act
ICAO	International Civil Aviation Organization	TWA	Time-weighted Average
IDLH	Immediately Dangerous to Life and Health	UN	United Nations
IMDG	International Maritime Dangerous Goods	VOC	Volatile Organic Compounds
IMO	International Maritime Organization	vPvB	Very Persistent and Very Bioaccumulating
LC₅₀	50% Lethal Concentration	WHMIS	Workplace Hazardous Materials Information System
LD₅₀	50% Lethal Dose		

DISCLAIMER OF RESPONSIBILITY

The information on this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, expressed or implied, regarding its correctness. Some information presented and conclusions drawn herein are from sources other than direct test data on the substance itself. The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume damage or expense arising out of or in any way responsibility and expressly disclaim liability for loss, connected with handling, storage, use, or disposal of this product. If the product is used as a component in another product, this SDS information may not be applicable.

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