

Safety Data Sheet

HYDROXYSAN PLUS

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SECTION 1: Identification

Identification

Product Name : HYDROXYSAN PLUS
Product code : FP0490
CAS-No. : MIXTURE
Synonyms : No additional information available
EPA Registration number : 10324-214-2686
Recommended use : EPA registered pesticide
Restrictions on use : No additional information available

Supplier

Hydrite Chemical Co.
17385 Golf Parkway
Brookfield, WI, 53045
T 262-792-1450

Emergency telephone number

EMERGENCY RESPONSE NUMBERS:

24 Hour Emergency #: 1-800-283-4459

CHEMTREC Emergency #: (800) 424-9300

SECTION 2: Hazard(s) identification

Classification of the substance or mixture

GHS US classification

Organic Peroxide Category F
Corrosive to metals Category 1
Acute toxicity (inhalation:dust,mist) Category 4
Skin corrosion/irritation Category 1B
Serious eye damage/eye irritation Category 1
Specific target organ toxicity – Single exposure, Category 3, Respiratory tract irritation
Hazardous to the aquatic environment – Acute Hazard Category 2

GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US)



Signal word (GHS US)

: Danger

Hazard statements (GHS US)

: Heating may cause a fire.
May be corrosive to metals
Causes severe skin burns and eye damage
Harmful if inhaled

May cause respiratory irritation
Toxic to aquatic life

Precautionary statements (GHS US)

Prevention	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep/Store away from clothing and other combustible materials Keep only in original container. Do not breathe dust/fume/gas/mist/vapors/spray. Wash hands, forearms and face thoroughly after handling. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Wear protective gloves/protective clothing/eye protection/face protection.
Response	: If swallowed: rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. IF INHALED: Remove person to fresh air and keep 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. Specific treatment (see supplemental first aid instruction on the SDS). Wash contaminated clothing before reuse. Absorb spillage to prevent material-damage.
Storage	: Store in a well-ventilated place. Keep container tightly closed. Store in a secure manner. Store in corrosive resistant container with a resistant inner liner. Protect from sunlight. Store at temperatures not exceeding 30° C/86° F. Keep cool. Store away from other materials.
Disposal	: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Hazards not otherwise classified

Hazards not otherwise classified	: Peroxyacetic acid is classified by GHS as an Organic Peroxide but is also a strong oxidizing agent, may intensify fire.
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Unknown acute toxicity

Unknown acute toxicity	: 7.84% of the mixture consists of ingredient(s) of unknown acute toxicity (Dermal) 1.24% of the mixture consists of ingredient(s) of unknown acute toxicity (Inhalation (Dust/Mist))
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SECTION 3: Composition/Information on ingredients

Substances/ Mixtures

Name	Product identifier	%	GHS US classification
HYDROGEN PEROXIDE	CAS-No.: 7722-84-1	27.3	Ox. Liq. 1, H271 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Corr. 1A, H314 Eye Dam. 1, H318 STOT SE 3, H335

HYDROXYSAN PLUS
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Name	Product identifier	%	GHS US classification
ACETIC ACID	CAS-No.: 64-19-7	5 – 10	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation:vapour), H332 Skin Corr. 1A, H314 Eye Dam. 1, H318 Aquatic Acute 3, H402
PERACETIC ACID	CAS-No.: 79-21-0	5.9	Flam. Liq. 3, H226 Org. Perox. D, H242 Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Corr. 1B, H314 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400
1-HYDROXYETHYLIDENE-1,1-DIPHOSPHONIC ACID	CAS-No.: 2809-21-4	1 – 5	Met. Corr. 1, H290 Acute Tox. 4 (Oral), H302 Skin Corr. 1C, H314 Eye Dam. 1, H318
SULFURIC ACID	CAS-No.: 7664-93-9	0.1 – 0.5	Met. Corr. 1, H290 Acute Tox. 2 (Inhalation:dust,mist), H330 Skin Corr. 1A, H314 Eye Dam. 1, H318 Carc. 1A, H350 STOT SE 3, H335 Aquatic Chronic 3, H412

Note: Any chemical identity and/or exact percentage not expressly stated is being withheld as a trade secret or is due to batch variation.

SECTION 4: First-aid measures

Description of first aid measures

First-aid measures general	: Seek medical attention immediately.
First-aid measures after inhalation	: If inhaled: Remove to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY. Symptoms may be delayed.
First-aid measures after skin contact	: If on skin: Immediately flush skin with plenty of water for at least 15 minutes but preferably 30 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Do not reuse clothing and shoes until cleaned. Discard items which cannot be decontaminated, including leather articles such as shoes, belts and watchbands. Do not interrupt flushing. For acid splashes over large areas of the body, transport quickly to an emergency care facility. If it can be done safely, continue flushing skin with water during transport to emergency care facility.
First-aid measures after eye contact	: If in eyes: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. Get immediate medical attention. Remove contact lenses, if present and easy to do. Continue rinsing. Do not interrupt flushing. Continue flushing with water during transport to emergency care facility.
First-aid measures after ingestion	: If swallowed: If fully conscious, drink a quart of water. DO NOT induce vomiting. CALL A PHYSICIAN IMMEDIATELY. If unconscious or in convulsions, take immediately to a hospital or a physician. NEVER induce vomiting or give anything by mouth to an unconscious victim. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Rinse mouth out with water.

Most important symptoms and effects (acute and delayed)

Symptoms/effects after inhalation	: CORROSIVE-CAUSES SEVERE IRRITATION AND BURNS. Vapors or mists may cause: Respiratory irritation. Shortness of breath. burning sensation. difficulty in breathing. Hoarseness. Cough. Nausea. vomiting. Pulmonary edema. Prolonged or repeated exposure may cause: Nosebleeding. Bronchitis. Chronic exposure may cause: Lung damage. Tooth erosion.
Symptoms/effects after skin contact	: CORROSIVE-CAUSES SEVERE IRRITATION AND BURNS. Contact with concentrated liquid for a short period of time may cause a temporary whitening or bleaching of the skin. Symptoms may include pain, severe local redness, swelling, and tissue damage. Effects will be worse if the skin is abraded (scratched or cut).
Symptoms/effects after eye contact	: CORROSIVE-CAUSES SEVERE IRRITATION AND BURNS. Risk of serious damage to eyes. Direct contact may result in corneal injury. Possible effects following exposure: May cause destruction of eye tissue. disintegration, scarring, clouding, ulcerations, blindness, corneal damage. Permanent eye damage. Symptoms may include: redness, itching, tears. stinging. pain. blisters. Effects may vary depending on length of exposure, solution concentration, and first aid measures. Effects may be delayed.
Symptoms/effects after ingestion	: CORROSIVE-CAUSES SEVERE IRRITATION AND BURNS. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Nausea. vomiting. Blood in vomit. abdominal cramps. Cough. Shortness of breath. Suffocation. Gastric perforation. May perforate the esophagus or the digestive tract. The rapid releasing of oxygen can cause distension and bleeding of the mucosa in the stomach and lead to severe damage of the intestinal organs, especially in the event of greater intake of the product. Aspiration into the lungs may occur during ingestion or vomiting, resulting in severe pulmonary injury.
Immediate medical attention and special treatment, if necessary	: 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. Hydrogen peroxide 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.

SECTION 5: Fire-fighting measures

Extinguishing media

Suitable extinguishing media	: Use extinguishing media appropriate for surrounding fire. Water spray. Water only. Water fog. Flood with plenty of water.
Unsuitable extinguishing media	: Do not use organic compounds.

Specific hazards arising from the chemical

Fire hazard	: Heating may cause a fire. Heated material can form flammable vapors with air. Decomposition will release oxygen, which will intensify a fire.
Explosion hazard	: STRONG OXIDIZER. vapors may form explosive mixture with air. Forms explosive mixtures with combustible, organic, or other easily oxidizable materials. Exposure to fire may cause containers to rupture/explode. Decomposes on exposure to temperature rise. The rate of decomposition may exceed the vent capacity of storage containers and cause an explosion. May generate potentially explosive oxygen. Could be ignited by friction, heat, sparks or flames.
Reactivity in case of fire	: Contact with metals could evolve flammable hydrogen gas.
Hazardous decomposition products	: Sulfur oxides (SO _x). Carbon monoxide. Carbon dioxide. Toxic fumes may be released. Corrosive vapors. Carbon oxides (CO, CO ₂). Oxygen.
Firefighting instructions	: Evacuate personnel to a safe area. Do not enter fire area without proper protective equipment, including respiratory protection. Stay upwind/keep distance from source. Move containers from fire area if it can be done without personal risk. Use water spray or fog for cooling exposed containers. Prevent runoff from entering drains, sewers or waterways.

- Protection during firefighting : See section 8 of the SDS for more information on personal protective equipment. Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

- Protective equipment : STRONG OXIDIZER. CORROSIVE MATERIAL. Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". Do not exceed the occupational exposure limits (OEL).
- Emergency procedures : CORROSIVE MATERIAL. STRONG OXIDIZER. Evacuate unnecessary personnel. Stop leak if safe to do so. Ventilate spillage area. Remove all sources of ignition.

Environmental precautions

- Environmental precautions : Avoid release to the environment. Notify authorities if product enters sewers or public waters.

Methods and material for containment and cleaning up

- For containment : Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. Stop leak, if possible without risk. Do not touch or walk on the spilled product.
- Methods for cleaning up : Do not place spilled materials back into the original container. Soak up residue with inert absorbent material. Place in non-leaking containers for immediate disposal. Use non-sparking tools and equipment. Do not absorb in sawdust, paper, cloth or other combustible absorbents. Do not use metal containers. Use vented disposal containers. Generation of gas during decomposition can cause pressure in closed systems. Carefully neutralize remaining residue with a dilute solution of sodium carbonate (soda ash). Adequate ventilation is required if soda ash is used, because of the consequent release of carbon dioxide gas. Flush remaining area with plenty of water to remove trace residue and dispose of properly.
- Other information : Dispose of materials or solid residues at an authorized site. 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.

SECTION 7: Handling and storage

Precautions for safe handling

- Additional hazards when processed : Ensure all procedures for handling, transfer, and other operations have been understood before use. Avoid contamination by any source including metals, dust, hard water, and organic materials. Do not return any product to container because of the risk of contamination. If contamination occurs, the container may become hot to the touch. Move the container to a ventilated area if possible without risk or spilling. Cool the container with water if possible. Use caution - if water enters the container, heat may be generated.
- Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust or mist formation. Avoid breathing dust/fume/gas/mist/vapors/spray. Do NOT taste or swallow. Ground all equipment and containers before opening to prevent accumulation of static charge. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only non-sparking tools. Empty containers retain product residue and can be hazardous. DO NOT pressurize, cut, weld, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition. Avoid contamination. never return unused product back to container. Generation of gas during decomposition can cause pressure in closed systems.
- Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product. Wash contaminated clothing before reuse. Remove and isolate contaminated clothing and shoes and place in a metal container with water – fire hazard if allowed to dry.

Conditions for safe storage, including any incompatibilities

Storage conditions	: STRONG OXIDIZER. CORROSIVE MATERIAL. Store in a cool, well ventilated area, out of direct sunlight. Store in a dry location away from heat. Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Avoid damage to containers. Keep closed at all times when not in use. Keep container out of direct sunlight. To maintain product quality, store at temperatures recommended in section 2 of this SDS. Do not store on wooden pallets. Store away from other materials. Do not store near combustible materials. Reacts with most metals to form explosive/flammable hydrogen gas. Refer to the National Fire Protection Association (NFPA) Code for the Storage of Organic Peroxide Formulations.
Incompatible materials	: Combustible materials. Metals. Keep away from incompatibles. Refer to Section 10 on Incompatible Materials.
Storage temperature	: No additional information available
Heat-ignition	: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Packaging materials	: Store in corrosive resistant container with a resistant inner liner. Keep only in the original container. Do not store in unlabeled or mislabeled containers. Keep container tightly closed. Store in a secure manner.

SECTION 8: Exposure controls/personal protection

Control parameters

Component	ACGIH	OSHA
ACETIC ACID	15 ppm STEL, 10 ppm TWA	25 mg/m ³ TWA
HYDROGEN PEROXIDE	1 ppm TWA	1.4 mg/m ³ TWA
SULFURIC ACID	0.2 mg/m ³ TWA (thoracic particulate matter)	1 mg/m ³ TWA
PERACETIC ACID	0.4 ppm STEL (inhalable fraction and vapor)	No data available
1-HYDROXYETHYLIDENE-1,1-DIPHOSPHONIC ACID	No data available	No data available

Appropriate engineering controls

Appropriate engineering controls	: General room ventilation and local exhaust are required. Process enclosures or other engineering controls may be needed to maintain airborne levels below recommended exposure limits. Maintain adequate ventilation. Do not use in closed or confined spaces. Avoid creating dust or mist. Keep levels below exposure limits. To determine exposure levels, monitoring should be performed regularly. Use explosion-proof ventilation equipment.
Environmental exposure controls	: Avoid release to the environment.

Individual protection measures/Personal protective equipment

Personal protective equipment	: Wear recommended personal protective equipment. Provide readily accessible eye wash stations and safety showers. Avoid cotton, wool and leather clothing and shoes.
Hand protection	: Chemical-resistant. Impervious. Protective gloves made of rubber or PVC. Acid-proof. Check gloves for leaks before use. Thoroughly wash the outside of gloves with soap and water before removal.
Eye protection	: Wear chemical safety goggles and a full face shield while handling this product. Wear a full-face respirator, if needed. Do not wear contact lenses.
Skin and body protection	: Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Rubber Apron. Rubber boots. Full-rubber acid suit. Impervious.

Respiratory protection	: Respiratory protection must be worn if ventilation does not eliminate symptoms or keep levels below recommended exposure limits. If exposure limits are exceeded, wear: NIOSH-Approved respirator. NIOSH-Approved self-contained breathing apparatus. DO NOT use any form of air-purifying respirator (APR) or filtering facepiece (AKA dust mask), especially those containing oxidizable sorbants such as activated carbon. DO NOT exceed limits established by the respirator manufacturer. All respiratory protection programs must comply with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements and must be followed whenever workplace conditions require a respirator's use.
Other information	: Wash with soap and water before meal times and at the end of each work shift. Good manufacturing practices require gross amounts of any chemical be removed from skin as soon as practical, especially before eating or smoking. Food, beverages, and tobacco products should not be carried, stored or consumed where this material is in use. Handle in accordance with good industrial hygiene and safety practice. NOTE: As the water content of hydrogen peroxide evaporates, cotton, rayon, and wool fibers are particularly subject to spontaneous combustion. Where there is significant risk of sudden splash or spray, it is advised that an apron or rubber suit be worn. Any contaminated clothing, including gloves, shoes, aprons, coveralls, etc, should be removed immediately and thoroughly flushed with water to eliminate any traces of hydrogen peroxide before cleaning and reuse. Residual hydrogen peroxide, if allowed to dry on material such as paper, fabrics, cotton, leather, wood or other combustibles can cause the material to ignite and result in fire.

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: clear.
Color	: Colorless.
Odor	: Vinegar-like.
Odor threshold	: No data available
pH	: < 1.5 (as is)
Melting point	: No data available
Freezing point	: No data available
Crystallization (Salt Out) Temperature	: No data available
Boiling point	: 212 °F
Flash point	: None to decomposition.
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: No data available
Vapor pressure	: 22 mm Hg @ 25 °C
Relative vapor density at 20°C	: No data available
Relative density	: 1.138 @ 25 °C
Solubility	: Complete.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 5 – 15 cSt @ 20 °C
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
SADT	: > 55 °C (> 131 °F)

SECTION 10: Stability and reactivity

Information on stability and reactivity

Reactivity	: Heating may cause a fire. May cause fire or explosion; strong oxidizer. Contamination from any source may cause rapid decomposition, oxygen gas release and dangerous pressure. Heat may also cause self-accelerating exothermic decomposition with oxygen gas and steam release that can cause dangerous pressures.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Contact with organic materials may cause fire and explosions. Readily oxidizes combustible, organic or other readily oxidizable materials. May react with certain metals to produce flammable hydrogen gas. Contact with metals, metallic ions, alkalis, reducing agents, and organic matter (such as alcohols or terpenes) may produce self-accelerated thermal decomposition.
Conditions to avoid	: UV light. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Protect from sunlight. Unstable on exposure to heat. pH variation. Incompatible materials.
Incompatible materials	: alkalies. bases. hydroxides. flammable materials. combustible materials. organics. organic materials. organic compounds. organic solvents. acetic anhydride. acetaldehyde. potassium tert-butoxide. alcohols. paper. dust. wood. leather. dirt. strong acids. nitric acid. hydrochloric acid. oxidizing agents. sodium peroxide. reducing agents. decomposition catalysts. metals. metal ions. metal oxides. heavy metals. metal salts. salts. copper or copper alloys. iron. galvanized iron. carbonates. phosphates. amines.
Hazardous decomposition products	: oxygen. hydrogen sulfide gas. Sulfur oxide. Sulfur compounds. Carbon dioxide. Carbon monoxide. acetic acid. Corrosive vapors. May generate flammable hydrogen gas. Material decomposes with the potential to produce a rupture of unvented closed containers. This material decomposes if contaminated, causing fire and possible explosions. Oxygen can be liberated at temperatures above ambient.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Inhalation:dust,mist: Harmful if inhaled.

Numerical measures of toxicity

Component	Oral LD50	Dermal LD50	Inhalation LC50
ACETIC ACID	Rat: 3310 mg/kg	No data available	Rat: 11.4 mg/l/4h Rat (ppm): 16000 ppm
HYDROGEN PEROXIDE	Rat: 1518 mg/kg	Rabbit: 9200 mg/kg	Rat: 2000 mg/m³
SULFURIC ACID	Rat: 2140 mg/kg	No data available	Rat: 0.375 mg/l/4h Rat (Dust/Mist): 0.375 mg/l
PERACETIC ACID	Rat: 1540 mg/kg	Rabbit: 1410 mg/kg Rat: > 2000 mg/kg	Rat: 186 mg/m³
1-HYDROXYETHYLIDENE-1,1-DIPHOSPHONIC ACID	Rat: 3130 mg/kg	Rabbit: > 10000 mg/kg	No data available

ATE Values: HYDROXYSAN PLUS (MIXTURE)

ATE US (dust, mist)	2.194 mg/l/4h
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Skin corrosion/irritation	: Causes severe skin burns.
Serious eye damage/irritation	: Causes serious eye damage.

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Respiratory or skin sensitization	: Not classified
Germ cell mutagenicity	: Not classified
Carcinogenicity	: This product contains 0.1% or more of the following chemicals listed by NTP, IARC, or OSHA as known or possible carcinogens: *Sulfuric acid mist
Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Viscosity, kinematic	: No data available
Likely routes of exposure	: Skin and eye contact. Ingestion. Inhalation.
Symptoms/effects after inhalation	: CORROSIVE-CAUSES SEVERE IRRITATION AND BURNS. Vapors or mists may cause: Respiratory irritation. Shortness of breath. burning sensation. difficulty in breathing. Hoarseness. Cough. Nausea. vomiting. Pulmonary edema. Prolonged or repeated exposure may cause: Nosebleeding. Bronchitis. Chronic exposure may cause: Lung damage. Tooth erosion.
Symptoms/effects after skin contact	: CORROSIVE-CAUSES SEVERE IRRITATION AND BURNS. Contact with concentrated liquid for a short period of time may cause a temporary whitening or bleaching of the skin. Symptoms may include pain, severe local redness, swelling, and tissue damage. Effects will be worse if the skin is abraded (scratched or cut).
Symptoms/effects after eye contact	: CORROSIVE-CAUSES SEVERE IRRITATION AND BURNS. Risk of serious damage to eyes. Direct contact may result in corneal injury. Possible effects following exposure: May cause destruction of eye tissue. disintegration, scarring, clouding, ulcerations, blindness, corneal damage. Permanent eye damage. Symptoms may include: redness, itching, tears. stinging. pain. blisters. Effects may vary depending on length of exposure, solution concentration, and first aid measures. Effects may be delayed.
Symptoms/effects after ingestion	: CORROSIVE-CAUSES SEVERE IRRITATION AND BURNS. May cause burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Nausea. vomiting. Blood in vomit. abdominal cramps. Cough. Shortness of breath. Suffocation. Gastric perforation. May perforate the esophagus or the digestive tract. The rapid releasing of oxygen can cause distension and bleeding of the mucosa in the stomach and lead to severe damage of the intestinal organs, especially in the event of greater intake of the product. Aspiration into the lungs may occur during ingestion or vomiting, resulting in severe pulmonary injury.
Medical Conditions Aggravated by Exposure	: Eye disorders. Skin disorders. Lung disorders. Respiratory system disorders.
Other information	: Sulfuric acid, per se, is not listed as a carcinogen by OSHA, the National Toxicology Program (NTP), the International Agency for Research on Cancer (IARC), or the ACGIH. IARC has concluded that there is sufficient evidence that occupational exposure to strong inorganic acid mists containing sulfuric acid is carcinogen to humans, resulting in an increased incidence of primary laryngeal cancers. The ACGIH lists strong inorganic acid mists containing sulfuric acid as a suspected human carcinogen (A2) and the NTP have classified inorganic acid mists containing sulfuric acid as a known human carcinogen. OSHA does not list sulfuric acid mist as a carcinogen.

SECTION 12: Ecological information

Toxicity

HYDROXYSAN PLUS (MIXTURE)

LC50 - Fish [1]	17.48 mg/l P. Promelas (fathead minnow)
EC50 - Crustacea [1]	9.47 mg/l D. magna
LC50 - Other aquatic organisms [1]	9.47 mg/l Daphnia Magna 48 hour
NOEC chronic fish	10 mg/l P. Promelas (fathead minnow)
NOEC chronic crustacea	5 mg/l C. dubia

Persistence and degradability

No additional information available

SECTION 13: Disposal considerations

Disposal methods

Regional waste regulation	: U.S. - RCRA (Resource Conservation Recovery Act) - D Series Wastes - Corrosivity D002. D003 - (REACTIVE WASTE).
Waste treatment methods	: Dispose of in accordance with all local, state and federal regulations.
Additional information	: Disposal methods identified are for the product as sold. For proper disposal of used material, an assessment must be completed to determine the proper and permissible waste management options permitted under applicable rules, regulations and/or laws governing your location. Since emptied containers retain product residue, follow label warnings even after container is emptied. Do not re-use empty containers. DO NOT pressurize, cut, weld, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition.

SECTION 14: Transport information

Modes of transport

DOT (Department of Transportation):

Identification Number (DOT)	: UN3109
Proper Shipping Name (DOT)	: ORGANIC PEROXIDE TYPE F, LIQUID (PEROXYACETIC ACID, TYPE F STABILIZED)
Hazard Class (DOT)	: 5.2 (8)
Packing group (DOT)	: Not regulated
Marine pollutant	: No
Labels Required (DOT)	: Organic peroxide, Corrosive



IMDG (International Maritime Dangerous Goods Code):

Identification Number (IMDG)	: UN3109
Proper Shipping Name (IMDG)	: ORGANIC PEROXIDE TYPE F, LIQUID (PEROXYACETIC ACID, TYPE F STABILIZED)
Hazard Class (IMDG)	: 5.2 (8)
Packing group (IMDG)	: Not regulated
Marine pollutant	: No
Labels Required (IMDG)	: Organic peroxides, Corrosive substances



IATA (International Air Transport Association):

Identification Number (IATA)	: UN3109
Proper Shipping Name (IATA)	: ORGANIC PEROXIDE TYPE F, LIQUID (PEROXYACETIC ACID, TYPE F STABILIZED)
Hazard Classes (IATA)	: 5.2 (8)
Packing group (IATA)	: Not regulated
Marine pollutant	: No
Labels Required (IATA)	: Organic Peroxides, Corrosive



HYDROXYSAN PLUS

Product code: FP0490

Other transport information

The transportation classifications provided on this SDS are for informational purposes only and based upon the properties of the product as described in this document. The listed transportation classifications may not address variations due to changes in package size, mode of shipment, regional or country regulations, or other regulatory descriptors.

DOT RQ Table

Name	DOT RQ
ACETIC ACID	5000 lbs RQ
SULFURIC ACID	1000 lbs RQ

SECTION 15: Regulatory information

US Federal regulations

All components of this product are present and listed as Active on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory or are exempt from TSCA Inventory requirements.

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

PERACETIC ACID	CAS-No. 79-21-0	5.9%
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Sulfuric acid appears on the Section 313 List. However, the listing only applies to the aerosol forms of sulfuric acid.

ACETIC ACID (64-19-7)

CERCLA RQ	5000 lb
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HYDROGEN PEROXIDE (7722-84-1)

RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb
Section 302 EPCRA Reportable Quantity (RQ)	1000 lb concentration >52%
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 lb (concentration >52%)

SULFURIC ACID (7664-93-9)

CERCLA RQ	1000 lb
RQ (Reportable quantity, section 304 of EPA's List of Lists)	1000 lb
Section 302 EPCRA Reportable Quantity (RQ)	1000 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	1000 lb

PERACETIC ACID (79-21-0)

RQ (Reportable quantity, section 304 of EPA's List of Lists)	500 lb
Section 302 EPCRA Reportable Quantity (RQ)	500 lb
SARA Section 302 Threshold Planning Quantity (TPQ)	500 lb

HYDROXYSAN PLUS

Product code: FP0490

FIFRA Labelling

EPA Registration Number 10324-214-2686

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals.

SULFURIC ACID (7664-93-9)

Listed on IARC (International Agency for Research on Cancer)
Listed as carcinogen on NTP (National Toxicology Program)

*Sulfuric acid mist

US State regulations

Component	CAS No.	State or local regulations
ACETIC ACID	64-19-7	Wisconsin HAP
HYDROGEN PEROXIDE	7722-84-1	Wisconsin HAP

SECTION 16: Other information

Hazard Rating System

Health: 3
Flammability: 2
Physical: 1

NFPA Rating System

NFPA health hazard: 3
NFPA fire hazard: 2
NFPA reactivity: 1
NFPA specific hazard: OX

Abbreviations and acronyms

HAP	Hazardous Air Pollutant
VOC	Volatile Organic Compound
STEL	Short Term Exposure Limit
TWA	Total Average Weight
RQ	Reportable Quantity

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Indication of changes: Change(s) made in section 2.Changes made throughout the SDS.New format.

SDS Prepared by: EP

The data in this Safety Data Sheet relates to the specific material designated and does not relate to its use in combination with any other material or process. The data contained is believed to be correct. However, since conditions of use are outside our control it should not be taken as warranty or representation for which HYDRITE CHEMICAL CO. assumes legal responsibility. This information is provided solely for your consideration, investigation, and verification.