

MATERIAL SAFETY DATA SHEET

HYDROXYSAN PA, NO. 480

MSDS ID: FP0480

Revised: 03-04-2008

Replaces: 12-06-2005

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: HYDROXYSAN PA, NO. 480
MSDS ID: FP0480
Synonyms: Peracetic Acid, Acetyl Hydroperoxide, Peroxyacetic Acid
CAS Number: MIXTURE
Chemical Family: Sanitizer and Disinfectant
Formula: EPA Registration: #63838-1-2686

DISTRIBUTED BY:
Hydrite Chemical Co.
300 N. Patrick Blvd.
Brookfield, WI 53008-0948
(262) 792-1450

EMERGENCY RESPONSE NUMBERS:
24 Hour Emergency #: (414) 277-1311
CHEMTREC Emergency #: (800) 424-9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: DANGER! STRONG OXIDIZER! CORROSIVE. Causes severe burns to eyes, skin, and respiratory tract. Contact with other material may cause fire or explosive decomposition. Keep from contact with clothing and other combustible materials. Effects may be delayed. Harmful or fatal if swallowed. May cause blindness. Harmful if inhaled.

Physical State: Liquid.
Color: Colorless.
Odor: Pungent. Strong vinegar-like odor.

POTENTIAL HEALTH EFFECTS

Routes Of Exposure: Eyes. Skin. Inhalation. Ingestion. Absorption.

Target Organs: Eyes. Skin. Respiratory System. Teeth.

Eye Contact: CORROSIVE-Causes severe irritation and burns. May cause: corneal damage. permanent eye damage. blindness. Effects may be delayed.

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. Prolonged or repeated exposure may cause: severe burns. tingling. redness. swelling. blistering. tissue destruction. ulceration. Dust or mist from solutions can cause irritant dermatitis.

Skin Absorption: May be harmful if absorbed through skin.

Inhalation: CORROSIVE-Causes severe irritation and burns. High concentrations of vapor or mist may cause severe irritation of the: eyes. nose. respiratory tract. May cause: coughing. chest discomfort. Excessive exposure may cause: pulmonary edema. Effects may be delayed.

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Ingestion: CORROSIVE-Causes severe irritation and burns. May cause: perforation of the intestinal tract. nausea. vomiting. diarrhea. abdominal pain. bleeding. tissue destruction. death. 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. Danger of penetration of the lungs when swallowed or vomited, due to gas evolution and foam formation.

Medical Conditions Aggravated By Exposure To Product: Lung disorders. Eye disorders. Skin disorders. Respiratory system disorders. Teeth disorders.

Other: None known.

Cancer Information: This product does not contain greater than 0.1% of the known or potential carcinogens listed in NTP, IARC, or OSHA.

Potential Environmental Effects: See Section 12.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS Number</u>	<u>OSHA Hazard</u>	<u>% by Wt.</u>
Water	7732-18-5	NO	Balance
Hydrogen Peroxide	7722-84-1	YES	26 - 28 %
Acetic Acid	64-19-7	YES	7 - 8 %
Peracetic Acid	79-21-0	YES	5.6 - 6 %

4. FIRST-AID MEASURES

Eye Contact: 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.

Skin Contact: Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Do not reuse clothing and shoes until cleaned. Discard footwear which cannot be decontaminated.

Inhalation: Remove to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY.

Ingestion: 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 with fresh water. Give large amounts of water to drink.

Note to Physicians: 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 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. Do not administer activated charcoal, since large amounts of gas from

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hydrogen peroxide may form. Inhalation - Delayed pulmonary edema may occur, patient should be maintained under observation for this complication. Ingestion - The agent is a corrosive acid and produces coagulative necrosis of the buccal cavity, esophagus and stomach. The major causes of death are circulatory shock, asphyxia due to glottic or laryngeal edema, and perforation of the esophagus or stomach. While treatment of acute ingestion is controversial, induction of emesis and use of carbon dioxide producing anti-acids are contraindicated. Nasal gastric intubation should be undertaken only with the risk of perforation recognized in contrast to the value of gastric aspiration and lavage. Late complications may include esophageal, gastric or pyloric stenosis. Consideration should be given to careful endoscopy as stomach or esophageal burns, perforations or strictures may occur. Careful gastric lavage with an endotracheal tube in place should be considered. Observation may be warranted. Treatment is controlled removal of exposure with symptomatic and supportive care.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Water (flood with water). Water spray. Water fog. DO NOT USE: Organic compounds.

Fire Fighting Methods: Evacuate area of unprotected personnel. Wear protective clothing including NIOSH-approved self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Use water spray to cool fire-exposed containers and disperse vapors. Move containers from fire area if possible without hazard. Run-off from fire control may cause pollution.

Fire And Explosion Hazards: STRONG OXIDIZER. Forms explosive mixtures with combustible, organic, or other easily oxidizable materials. These mixtures are easily ignited by friction or heat. Heated material can form flammable vapors with air. Heated material can form explosive vapors with air. Decomposition will release oxygen, which will intensify a fire. The rate of decomposition may exceed the vent capacity of storage containers and cause an explosion.

Hazardous Combustion Products: Oxygen. Carbon dioxide. Carbon monoxide.

6. ACCIDENTAL RELEASE MEASURES

Spill Clean-Up Procedures: CORROSIVE MATERIAL. STRONG OXIDIZER. Eliminate all sources of ignition. Evacuate unprotected personnel from area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in Section 8. Never exceed any occupational exposure limit. Shut off source of leak if safe to do so. Never return spilled product into its original container. Never put spilled material into another container for disposal. Dilute spill with large amounts of water to a concentration of 5% hydrogen peroxide; hold in a pond or diked area until peroxide is completely decomposed or dispose of according to all local, state and federal regulations. Hydrogen peroxide may be decomposed by adding sodium metabisulfite or sodium sulfite after diluting to 5%. Flush remaining area with water to remove trace residue and dispose of properly. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs. 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. Do not touch or walk through spilled material. Use non-sparking tools and equipment.

7. HANDLING AND STORAGE

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Handling: Avoid contact with eyes, skin, and clothing. Use with adequate ventilation. Do not swallow. Avoid breathing vapors, mists, or dust. Do not eat, drink, or smoke in work area. Wash thoroughly after handling. Empty containers retain product residue (vapor, dust, or liquid) and can be dangerous. DO NOT pressurize, cut, weld, braze, solder, drill, grind, or expose such containers to heat, flame, sparks, static electricity, or other source of ignition. They may explode and cause injury or death. Avoid contamination. Never return unused product to container. Contamination may cause decomposition and generation of oxygen gas which could result in high pressure and possibly container rupture. Use non-sparking tools and equipment. Utensils used for handling hydrogen peroxide should only be made of glass, stainless steel, aluminum or plastic.

Storage: CORROSIVE MATERIAL. STRONG OXIDIZER. Store in a cool, well ventilated area away from all sources of ignition and 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. CORROSIVE MATERIAL. OXIDIZER. Store in a cool, well ventilated area away from all sources of ignition and 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. Avoid storage on wood floors or near wooden walls, etc.. Do not store on wooden pallets. Store in a vented container. Do not store near combustible materials. DO NOT contaminate water, food or feed by storage or disposal. Refer to the National Fire Protection Association (NFPA) Code for the Storage of Organic Peroxide Formulations. Static electricity may accumulate and create a fire hazard. Ground fixed equipment. Bond and ground transfer containers and equipment.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines:

<u>Component</u>	<u>OSHA PEL</u>	<u>OSHA STEL/C</u>	<u>ACGIH TWA</u>	<u>ACGIH STEL/C</u>
Water	Not Estab.	Not Estab.	Not Estab.	Not Estab.
Hydrogen Peroxide	1 ppm	Not Estab.	1 ppm	Not Estab.
Acetic Acid	10 ppm	Not Estab.	10 ppm	15 ppm
Peracetic Acid	Not Estab.	Not Estab.	Not Estab.	Not Estab.

Engineering Controls: Local exhaust or other engineering controls are needed to minimize exposures. Local exhaust ventilation, 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.

Eye/Face 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 Protection: Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: Butyl rubber. Neoprene. Polyvinyl chloride. Nitrile. Inspect regularly for leaks. Thoroughly rinse the outside of gloves with water prior to removal. Avoid cotton, wool and leather clothing and shoes.

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

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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 Protective Equipment: Eye-wash station. Safety shower. Rubber apron. Rubber boots. Impervious clothing. Full body suit. 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.

General Hygiene Conditions: 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.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid.

Color: Colorless.

Odor: Pungent. Strong vinegar-like odor.

Boiling Point (deg. F): N.D.

Freezing Point (deg. F): N.D.

Melting Point (deg. F): N.D.

Vapor Pressure (mm Hg): 22 @ 25 Deg. C

Vapor Density (air=1): N.D.

Solubility in Water: Appreciable

pH: < 1 % (10% solution)

Specific Gravity: 1.122

% Volatile (wt%): 99%+

Evaporation Rate (nBuAc = 1): N.D.

VOC (wt%): N.D.

VOC (lbs/gal): N.D.

Viscosity: N.D.

Flash Point: 200 Deg. F.

Flash Point Method: CC.

Lower Explosion Limit: N.A.

Upper Explosion Limit: N.A.

Autoignition Temperature: 270 Deg. C

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions.

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Conditions To Avoid: Avoid elevated temperatures. Avoid exposure to light. Excessive heat or contamination could cause product to become unstable. Do not drop or drag containers; material is shock sensitive. Avoid contact with heat, sparks, electric arcs, other hot surfaces, and open flames.

Incompatible Materials: Oxygen. Reducing agents. Alkalies. Combustible materials. Organics. Hydrochloric acid. Wood. Dust. Paper. Dirt. Oils. Dry vegetables. Cyanides. Decomposition catalysts. Metals. Metal Salts. Metal ions. Strong oxidizing agents. Amines. Strong acids. Strong bases. Reactive Metals. Leather. Heavy metals.

Hazardous Decomposition Products: Oxygen. Carbon dioxide. Carbon monoxide. Acetic acid.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur under normal conditions. 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.

11. TOXICOLOGICAL INFORMATION

LD50 Oral: No Data

LD50 Skin: No Data

LC50 Inhalation: No Data

12. ECOLOGICAL INFORMATION

Ecotoxicological Information: No data available.

Chemical Fate Information: No data available.

13. DISPOSAL CONSIDERATIONS

Hazardous Waste Number: D001, D002

Disposal Method: Dispose of in a permitted hazardous waste management facility following all local, state and federal regulations. Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations. Since emptied containers retain product residue, follow label warnings even after container is emptied. DO NOT pressurize, cut, weld, solder, drill, grind or expose empty containers to heat, flame, sparks or other sources of ignition. Empty containers should be triple rinsed with water before discarding.

14. TRANSPORTATION INFORMATION

DOT (Department of Transportation):

Proper Shipping Name: Hydrogen Peroxide and Peroxyacetic Acid Mixtures, Stabilized with Acids, Water and not more than 6% Peroxyacetic Acid

Hazard Class: 5.1 (8)

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Identification Number: UN3149
Packing Group: II
Label Required: OXIDIZER; CORROSIVE
Reportable Quantity (RQ): 5000# (Acetic Acid)

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA Inventory Status: All components of this product are on the TSCA Inventory or are exempt from TSCA Inventory requirements.

SARA Title III Section 311/312 Category:

Immediate (Acute) Health Hazard: Y

Delayed (Chronic) Health Hazard: N

Fire Hazard: Y

Sudden Release Of Pressure Hazard: N

Reactive Hazard: N

SARA Section 302/304/313/HAP:

<u>Component</u>	<u>CERCLA RQ</u>	<u>SARA RQ</u>	<u>SARA TPQ</u>	<u>SARA 313</u>	<u>U.S. HAP</u>
Water	N.A.	N.A.	N.A.	NO	NO
Hydrogen Peroxide	N.A.	* 1000	* 1000	NO	NO
Acetic Acid	5000	N.A.	N.A.	NO	NO
Peracetic Acid	N.A.	500	500	YES	NO

Note: * SARA RQ and TPQ are for Hydrogen Peroxide (Conc.> 52%).

U.S. STATE REGULATIONS

California - The following components are listed under Proposition 65:

Heavy metals as Pb: 0.5 ppm (max)

Wisconsin - The following components are listed as a Wisconsin HAP:

Hydrogen Peroxide. Acetic Acid.

16. ADDITIONAL INFORMATION

Hydrite Rating System

Health: 3

Flammability: 1

Reactivity: 1

* = Chronic Health Hazard

NFPA Rating System

Health: 3

Flammability: 1

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Reactivity: 1

Special Hazard: None

MSDS Abbreviations

N.A. = Not Applicable

N.D. = Not Determined

HAP = Hazardous Air Pollutant

VOC = Volatile Organic Compound

C = Ceiling Limit

N.E./Not Estab. = Not Established

MSDS Prepared by: JAK

Reason for Revision: New product.

The data in this Material 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.