

SAFETY DATA SHEET

OXYGEN BLEACH

Revised: 02-07-2014

Replaces: 02-05-2014

1. IDENTIFICATION

Product Name: OXYGEN BLEACH
Synonyms: Peroxide; Hydrogen Dioxide
CAS Number: MIXTURE
Recommended Use: No data available.
Restrictions on Use: No data available.

Monaghan Corporation
2017 Dean Avenue
Des Moines, Iowa 50317
515-266-2120

EMERGENCY RESPONSE NUMBERS:
Emergency #: 515-266-2120
CHEMTREC Emergency #: (800) 424-9300 CC14908

2. HAZARD(S) IDENTIFICATION



Signal Word: Danger
GHS Classification: Serious Eye Damage/Eye Irritation Category 1
Skin Corrosion/Irritation Category 2
Oxidizing Liquid Category 3
Acute Toxicity - Inhalation Vapour Category 4

Hazard Statements: May intensify fire; oxidizer.
Causes skin irritation.
Causes serious eye damage.
Harmful if inhaled.

Precautionary Statements:

Prevention: Keep away from heat, sparks, open flames and hot surfaces. – No smoking.
Keep away from clothing and other combustible materials.
Take any precaution to avoid mixing with combustibles.
Avoid breathing dust, gas, mist, vapors or spray.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear gloves, eye and face protection and protective clothing.

Response: IF ON SKIN: Wash with plenty of soap and water.
IF INHALED: Remove victim to fresh air and keep at rest in a position 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/physician.
Specific treatment (see First Aid on SDS or on this label).
If skin irritation occurs: Get medical advice or attention.
Take off contaminated clothing and wash before reuse.

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In case of fire: Use appropriate extinguishing media - See Section 5 on SDS.

Disposal: Dispose of in accordance with local, regional and international regulations.

Hazards Not Otherwise Classified: None known.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Component</u>	<u>CAS Number</u>	<u>% by Wt.</u>
Hydrogen Peroxide	7722-84-1	

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. Wash with soap and water.

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. Keep warm and quiet.

Ingestion: If swallowed, call a physician immediately. DO NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Rinse mouth with fresh water. Give 1-2 glasses of water to drink. Keep warm and quiet.

Note to Physicians:

Treatment is by dilution and is symptomatic and supportive.

Most Important Symptoms/Effects:

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

Skin Contact: Causes mild to moderate irritation. Contact with concentrated liquid for a short period of time may cause a temporary whitening or bleaching of the skin.

Skin Absorption: Practically non-toxic if absorbed through the skin.

Inhalation: Causes severe irritation. Vapors or mists may irritate: respiratory tract. May cause: coughing. throat pain. Prolonged or repeated contact may cause: nose bleeds. chronic bronchitis.

Ingestion: Causes severe irritation. Causes burns of the: upper digestive tract. respiratory tract. May cause: nausea. vomiting. bloating.

5. FIRE-FIGHTING MEASURES

Extinguishing Media: Water only. Water spray. Water fog. Water (flood with water). 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. Move containers from fire area if possible without hazard. Run-off from fire control may cause pollution.

Fire and Explosion Hazards: 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.

6. ACCIDENTAL RELEASE MEASURES

Spill Clean-Up Procedures: 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 and hold in a pond or diked area until hydrogen peroxide decomposes. Dispose according to methods outlined for waste disposal. 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.

7. HANDLING AND STORAGE

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: 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. See Section 10 for incompatible materials.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

OSHA Exposure Guidelines:

<u>Component</u>	<u>Limits</u>
Hydrogen Peroxide	1 ppm TWA; 1.4 mg/m ³ TWA

ACGIH Exposure Guidelines:

<u>Component</u>	<u>Limits</u>
Hydrogen Peroxide	1 ppm TWA

Engineering Controls: General room ventilation is required. 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.

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 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

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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: Handle in accordance with good industrial hygiene and safety practice. 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: Clear. Colorless.

Odor: Slight odor.

Odor Threshold: N.D.

pH: 3.00 (as is)

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

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

Initial Boiling Point or Boiling Range: N.D.

Flash Point: NONE.

Flash Point Method: N.A.

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

Flammability (solid, gas): N.D.

Lower Explosion Limit: N.A.

Upper Explosion Limit: N.A.

Vapor Pressure (mm Hg): N.D.

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

Specific Gravity or Relative Density: 1.058 @ 25C

Solubility in Water: Complete

Partition Coefficient (n-octanol/water): N.D.

Autoignition Temperature: Non-combustible

Decomposition Temperature: N.D.

Viscosity: N.D.

% Volatile (wt%): 100

VOC (wt%): 0

VOC (lbs/gal): 0

Fire Point: N.D.

10. STABILITY AND REACTIVITY

Reactivity: No data available.

Chemical Stability: Stable under normal conditions.

Possibility of Hazardous Reactions: Hazardous polymerization will not occur under normal conditions. Contact with organic materials may cause fire and explosions. 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: Avoid elevated temperatures. Avoid exposure to light. UV-rays. pH variations. Excessive heat or contamination could cause product to become unstable.

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Incompatible Materials: Oxygen. Reducing agents. Alkalies. Combustible materials. Organics. Wood. Dust. Paper. Dirt. Decomposition catalysts. Metals. Metal salts. Metal ions. Copper or copper alloys. Galvanized iron. Metal Oxides. Acids. Salts.

Hazardous Decomposition Products: Oxygen. 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

<u>Component</u>	<u>Oral LD50</u>	<u>Dermal LD50</u>	<u>Inhalation LC50</u>
Hydrogen Peroxide	Rat: 801 mg/kg	Rabbit: 2000 mg/kg	4H Rat: 2.0 g/m ³

Acute Toxicity Estimate (ATE):

Oral:	4,698 mg/kg
Dermal:	11,730 mg/kg
Inhalation Vapor:	11.7302 mg/L
Inhalation Dust/Mist:	11.7302 mg/L

Routes of Exposure: Eyes. Skin. Inhalation. Ingestion.

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

Skin Contact: Causes mild to moderate irritation. Contact with concentrated liquid for a short period of time may cause a temporary whitening or bleaching of the skin.

Skin Absorption: Practically non-toxic if absorbed through the skin.

Inhalation: Causes severe irritation. Vapors or mists may irritate: respiratory tract. May cause: coughing. throat pain. Prolonged or repeated contact may cause: nose bleeds. chronic bronchitis.

Ingestion: Causes severe irritation. Causes burns of the: upper digestive tract. respiratory tract. May cause: nausea. vomiting. bloating.

Medical Conditions Aggravated by Exposure to Product: Lung disorders. Eye disorders.

Other: None known.

Cancer Information:

This product does not contain 0.1% or more of the known or potential carcinogens listed in NTP, IARC, or OSHA.

12. ECOLOGICAL INFORMATION

Ecotoxicological Information: Hydrogen Peroxide:

Slightly toxic. Fish 96 h LC50 between 10-37 mg/l
Moderately toxic. Daphnia magna (Water flea) EC50 = 7.7 mg/L
Moderately toxic. Daphnia pulex (Water flea) EC50 = 2.4 mg/L
Slightly toxic. Bacteria EC50 = 30 mg/L
Highly toxic. Algae EC50 = 0.85 mg/L

Chemical Fate Information: 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 contaminants.

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

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

13. DISPOSAL CONSIDERATIONS

Hazardous Waste Number: D001

Disposal Method: Dispose of in a permitted hazardous waste management facility following all local, state and federal regulations. An acceptable method of disposal is to dilute with a large amount of water and allow the hydrogen peroxide to decompose followed by discharge into a suitable treatment system in accordance with all regulatory agencies. The appropriate regulatory agencies should be contacted prior to disposal. Empty containers should be triple rinsed with water before discarding.

14. TRANSPORT INFORMATION

DOT (Department of Transportation):

Identification Number: UN2014
Proper Shipping Name: HYDROGEN PEROXIDE, AQUEOUS SOLUTION,
Hazard Class: Packing 5.1(8)
Group: PG II
Label Required: OXIDIZER

15. REGULATORY INFORMATION

TSCA Inventory Status: This product or all components of this product are listed on the EPA/TSCA Inventory of Chemical Substances.

SARA Title III Section 311/312 Category Hazards:

	<u>Immediate (Acute)</u>	<u>Delayed (Chronic)</u>	<u>Fire Hazard</u>	<u>Pressure Release</u>	<u>Reactive</u>			
	Yes	No	Yes	No	No			
Regulated Components:								
Component		CAS	CERCLA	SARA	SARA	U.S.	WI	Prop
Hydrogen Peroxide		<u>Number</u>	<u>RQ</u>	<u>EHS</u>	<u>313</u>	<u>HAP</u>	<u>HAP</u>	<u>65</u>
		7722-84-1	No	Yes	No	No	Yes	No

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

16. OTHER INFORMATION

Hazard Rating System

Health: 2
Flammability: 0
Reactivity: 1

* = Chronic Health Hazard

NFPA Rating System

Health: 2
Flammability: 0
Reactivity: 1
Special Hazard: OX

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: JB

Reason for Revision: New format. Changes made throughout the MSDS.

Revised: 02-07-2014

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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.