

Hydrogen Peroxide

25% – 35%

BrandNu[®]
Brand-Nu Laboratories, Inc.

REVISION DATE 03/06/19

SAFETY DATA SHEET

SECTION 1 IDENTIFICATION

Product Identifier:	Hydrogen Peroxide
Synonyms:	Hydrogen Peroxide Dilution ; Hydrogen Dioxide
Chemical Formula:	H ₂ O ₂ in Water
Molecular Weight:	34.01
Commodity Number:	PC2750H ; PC2753H; X00632; X00668
Applications:	Oxidizing, Purification, Bleaching, Etching
Manufacturer:	Brand-Nu Laboratories, Inc. 377 Research Parkway Meriden, CT 06450 Telephone: 203-235-7989
24 Hour Emergency Telephone Number	ChemTel (Toll free in U.S. and Canada) 800-255-3924 813-248-0585 ChemTel (International) +1-813-248-0585

SECTION 2 HAZARDS IDENTIFICATION

GHS Classification

Oxidizing liquids (Category 2), H272
Acute toxicity, Oral (Category 4), H302
Skin corrosion (Category 1A), H314
Serious eye damage (Category 1), H318
Acute aquatic toxicity (Category 3), H402

GHS Label and Precautionary Statements

Pictogram



Signal Word

DANGER

Hazard Statements

H272 May intensify fire; oxidizer
H302 Harmful if swallowed.
H314 Causes severe skin burns and eye damage.
H318 Causes serious eye damage.
H402 Harmful to aquatic life.

Precautionary Statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P220 Keep away from clothing and other combustible materials.
P264 Wash skin thoroughly after handling.
P270 Do not eat, drink or smoke when using this product.

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P273 Avoid release to the environment.
 P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
 P283 Wear fire resistant or flame retardant clothing.
 P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor/physician/first aider/if you feel unwell.
 P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
 P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
 P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/doctor/physician
 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/ doctor/ physician.
 P306 + P360 IF ON CLOTHING: Rinse immediately contaminated clothing and skin with plenty of water before removing clothes.
 P363 Wash contaminated clothing before reuse.
 P370 + P378 In case of fire: Use dry sand, dry chemical, or alcohol-resistant foam to extinguish.
 P371 + P380 + P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.
 P501 Dispose of contents/ container to an approved waste disposal plant.

Hazards not otherwise classified
 None

SECTION 3

COMPOSITION/ INFORMATION ON INGREDIENTS

CHEMICAL IDENTITY	CAS NO.	EC-NO.	%
Hydrogen Peroxide	7722-84-1	231-765-0	25% - 35%
Water	7732-18-5	231-791-2	Balance

SECTION 4

FIRST AID MEASURES

Inhalation :	Remove to fresh air. Seek immediate medical attention. If breathing is difficult give oxygen.
Ingestion :	Do not induce vomiting. If conscious give large amounts of water. Never give anything by mouth to an unconscious person.
Eye Contact :	Seek immediate medical attention. Rinse thoroughly with plenty of water for at least 15 minutes. Continue rinsing eyes during transport to hospital.
Skin Contact :	Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Consult a physician.
	<p>THE MOST IMPORTANT KNOWN SYMPTOMS AND EFFECTS OF OVEREXPOSURE ARE:</p> <p>Inhalation: Causes burns of the respiratory tract. May cause ulceration of the nasal tissue. High concentrations may cause delayed pulmonary edema.</p> <p>Ingestion: Causes gastrointestinal irritation with nausea, vomiting, and diarrhea. Ingestion may cause irritation of the esophagus, bleeding and ulcer formation.</p> <p>Skin contact: Causes severe irritation or burns may cause discoloring, swelling, and may form blisters.</p> <p>Eye contact: Liquid is corrosive and may cause pain and corneal damage.</p>

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SECTION 5 FIRE FIGHTING MEASURES	Flash Point	N.A.		Flammable Limits	Upper	N.A.							
	Method Used	N.A.			Lower	N.A.							
	Auto Ignition Temperature	N.A.											
	Suitable Extinguishing Media	Use only water. Do not use carbon dioxide. Do not use dry chemical.											
	Special Firefighting Procedures	Wear proper protective equipment and SCBA with full face-piece operated in the positive pressure mode. Move fire exposed containers from area if it can be done without risk.											
	Unusual Fire And Explosion Hazards	Strong oxidizer. Contact with combustible materials creates a more intense fire. May react explosively when involved with hydrocarbons (fuel). Use only water. Do not use carbon dioxide. Do not use dry chemical.											
	Combustion Products	Strong oxidizer.											
	Rating Scale 0 = None 1 = Slight 2 = Moderate 3 = Severe 4 = Extreme	NFPA Rating <table border="1" style="margin: auto; border-collapse: collapse;"> <tr> <td style="padding: 2px;">Health</td> <td style="padding: 2px;">3</td> </tr> <tr> <td style="padding: 2px;">Flammability</td> <td style="padding: 2px;">0</td> </tr> <tr> <td style="padding: 2px;">Reactivity</td> <td style="padding: 2px;">1</td> </tr> <tr> <td style="padding: 2px;">Other</td> <td style="padding: 2px;">OX</td> </tr> </table>					Health	3	Flammability	0	Reactivity	1	Other
Health	3												
Flammability	0												
Reactivity	1												
Other	OX												
SECTION 6 ACCIDENTAL RELEASE PROCEDURES	Steps To Be Taken In Case Of Spills	Shut off all sources of ignition. Use appropriate PPE. Avoid breathing mists or vapors. Assure adequate ventilation. Carefully absorb spill on a non-combustible material such as vermiculite or diatomaceous earth and place in an appropriate container for later disposal. Flush spill area with fresh water. Keep all combustible material away.											
	Waste Disposal Method	Do not dump into sewers, on the ground, or any body of water. Disposal practices must be in compliance with all existing federal, state and local environmental regulations.											
SECTION 7 HANDLING & STORAGE	Use appropriate PPE. Avoid breathing mists or vapors. Assure adequate ventilation. Keep away from heat, flame, or sparks. Do not store near combustible materials. Keep in a cool, dry, well ventilated storage area away from direct sunlight. Keep in a container with a proper safety vent. Wash thoroughly after handling. See section 10 for incompatibles.												
SECTION 8 EXPOSURE CONTROLS/ PERSONAL PROTECTION	Ventilation:	A system of local or general exhaust is recommended to keep employee exposures below airborne exposure limits.											
	Respiratory Protection:	None required where adequate ventilation conditions exist. If exposure limit is exceeded, a personal respirator as specified by the appropriate regulatory agency or respirator supplier should be used.											
	Eye/Skin Protection:	Safety goggles, uniform or protective work clothing, chemically resistant rubber gloves.											
	CHEMICAL ID	CAS NO.	OSHA PEL	ACGIH TLV	OTHER LIMITS	%							
	Hydrogen Peroxide	7722-84-1	1ppm (TWA)	1ppm (TWA)	IDLH 75ppm	25% - 35%							
	Water	7732-18-5	N.E.	N.E.	N.E.	Balance							
SECTION 9	Boiling Point	108° C @ 760 MM Hg	Relative Density	1.110 g/cm3									

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PHYSICAL AND CHEMICAL PROPERTIES	Vapor Pressure (mm Hg)	23 @ 20° C	Vapor Density (Air=1)	1.10
	pH	N.A.	Viscosity	N.A.
	Flammability (solid, gas)	N.A.	Odor Threshold	N.A.
	Flash Point	N.A.	Solubility In Water	Complete in all proportions
	Melting/Freezing Point	33° C	Evaporation Rate (Butyl Acetate = 1)	> 1.0
	Partition Coefficient N-Octanol/Water	N.A.		
	Appearance And Odor	Clear, colorless liquid with slight acidic odor.		
	Auto Ignition Temp.	N.A.	Decomposition Temp.	N.A.
		Lower	Upper	
	Flammability Or Explosive Limits	N.A.	N.A.	

SECTION 10 STABILITY & REACTIVITY DATA	Chemical Stability	Stable	XXX	Decomposes slowly to release oxygen. Unstable when heated or contaminated.		
		Unstable				
	Reactivity	No dangerous reaction known under conditions of normal use.				
	Conditions To Avoid	Heat, flames, other sources of ignition. Mechanical shock. Direct sunlight				
	Incompatibility	Combustible materials, strong reducing agents, most common metals, organic materials, metallic salts, alkalies, strong oxidizing agents.				
	Hazardous Decomposition Products	Oxygen, hydrogen gas, water,				
Hazardous Polymerization	Will Not Occur	XX		Will Occur		

SECTION 11 TOXICOLOGICAL INFORMATION	PRIMARY ROUTES OF EXPOSURE								
	Inhalation	Yes	Ingestion	Yes	Skin Absorption	Yes	Eye Contact	Yes	
	CARCINOGENICITY								
	NTP	No	Z- LIST	No	ACGIH has classified hydrogen peroxide as A3. Confirmed animal carcinogen with unknown relevance to humans.				
	IARC	No	OSHA	No					
	Toxicity Data:								
	LD ₅₀ 1.193 mg/Kg Oral – Rat								
	LC ₅₀ > 0.17mg/Kg Inhalation – Rat								
	Reproductive Effects: No information found								
	Specific Target Organs:								
Specific target organ toxicity - single exposure - Lungs. Respiratory tract irritation.									
Specific target organ toxicity - repeated exposure - None known.									
Medical Conditions Generally									
Aggravated By Exposure: No information found									

SECTION 12 ECOLOGICAL	Toxicity:
	Flathead minnow 96 HOUR LC ₅₀ =16.4 mg/L

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INFORMATION	<p>Daphnia magna 24 HOUR EC₅₀ = 7.7 mg/L Daphnia pulex 48 HOUR LC₅₀ = 2.4 mg/L Fresh water snail 96 HOUR LC₅₀ 17.7 mg/L</p> <p>Persistence and degradability - No data available Bioaccumulative potential - No data available Mobility in soil - No data available</p>												
SECTION 13 DISPOSAL CONSIDERATIONS	Do not dump into sewers, on the ground, or any body of water. Disposal practices must be in compliance with all existing federal, state and local environmental regulations.												
SECTION 14 TRANSPORTATION	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">Proper Shipping Name</td> <td>Hydrogen Peroxide, Aqueous Solutions With Not Less Than 20% But Not More Than 40% Hydrogen Peroxide</td> </tr> <tr> <td>Hazard Class</td> <td>5.1, (8)</td> </tr> <tr> <td>Packing Group</td> <td>II</td> </tr> <tr> <td>UN / NA Number</td> <td>UN 2014</td> </tr> <tr> <td>DOT Diamond Label</td> <td>OXIDIZER, CORROSIVE</td> </tr> <tr> <td>Marine Pollutant</td> <td>No</td> </tr> </table>	Proper Shipping Name	Hydrogen Peroxide, Aqueous Solutions With Not Less Than 20% But Not More Than 40% Hydrogen Peroxide	Hazard Class	5.1, (8)	Packing Group	II	UN / NA Number	UN 2014	DOT Diamond Label	OXIDIZER, CORROSIVE	Marine Pollutant	No
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SARA 311/312	Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard												
SARA 313	No												
SECTION 16 OTHER INFORMATION	<p>Preparation Date: 04/07/16 Revision Date: 03/06/19 Revised Section 1 change in emergency contact information</p>												

ACGIH	American Conference of Government industrial hygienists		IARC	International Agency for Research on Cancer		SCBA	Self-contained breathing apparatus
AIHA	American Industrial Hygiene Association		N.A.	Not Available / Not Applicable		STEL	Short Term Exposure Limit
CAS NO.	Chemical Abstracts Service number		N.E.	Not Established		TLV	Threshold Limit Value
CEILING	Exposure Level Never to Be Exceeded		NTP	National Toxicology Program		TSCA	Toxic Substances Control Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act		OSHA	Occupational Safety & Health Administration		WEEL	Workplace Environmental Exposure Limit
EPA	Environmental Protection Agency		PEL	Permissible Exposure Limit		Z-LIST	Part 1910 – OSHA Standards Subpart Z Toxic and Hazardous Substances
GHS	Global Harmonization System		SARA	Superfund Amendments and Reauthorization Act			

Brand-Nu Laboratories provides the information contained herein in good faith, but makes no representation as to its comprehensiveness or accuracy. This information is presented as a guide to the appropriate precautionary handling of this material by a properly trained person using this product. Individuals receiving this information must exercise independent judgment in determining the appropriateness for a particular purpose. Brand-Nu Laboratories makes no representations or warranties, either express or implied, including without limitation any warranties of merchantability, fitness for a particular purpose with respect to the information set forth herein or the product to which the information refers. Accordingly, Brand-Nu Laboratories will not be responsible for damages resulting from use or reliance upon this information.

Prepared by BNL Safety Group