Material Name: STERI-PEROX® Sterile ID: SP-98-01

STERI-PEROX[®]

Sterile Pharmaceutical Clean Room Formula Sterile Hydrogen Peroxide at 3% and 6%

MATERIAL SAFETY DATA SHEET – USA Version

COMPLIES WITH OSHA HAZARD COMMUNICATIONS STANDARD 29 CFR 1910.1200 (Complies with Commission Directive 91/155/EEC amended by 2001/58/EC)



Veltek Associates, Inc.

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Material Name: STERI-PEROX® Sterile ID: SP-98-01

Section 1 - Chemical Product and Company Identification

Chemical Name: Hydrogen peroxide and water.

Manufacturer Information

Veltek Associates, Inc. Phone: 610-644-8335 15 Lee Blvd. Fax: 610-644-8336

Malvern, PA USA 19355-1234 Emergency # 24 Hr CHEMTREC U.S. (800) 424-9300

24 Hr CHEMTREC International (703) 527-3887

Section 2 - Hazards Identification * * *

Emergency Overview

Product is a weak oxidizer. Decomposition may support combustion of organic materials. Product can cause moderate to severe irritation or burns of eyes, skin and mucous membranes. Product can cause irritation of the gastrointestinal tract and respiratory tract. Contact with eyes may cause eye damage. Ingestion/inhalation of large amounts may be harmful.

Potential Health Effects: Eyes

Contact can cause moderate to severe irritation and possible injury to the eyes. Symptoms include itching, burning, redness and tearing.

Potential Health Effects: Skin

This product can cause irritation or burns to the skin. Contact with skin may cause stinging pain or irritation.

Potential Health Effects: Ingestion

Ingestion can cause gastrointestinal irritation, nausea, vomiting and diarrhea. Large oral doses may cause irritation and blistering to the mouth, throat, and abdomen.

Potential Health Effects: Inhalation

Inhalation of product can cause irritation of the respiratory tract. Symptoms may include shortness of breath. Inhalation of large amounts may be harmful.

HMIS Ratings: Health: 1 Fire: 0 Physical Hazard: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe * = Chronic hazard

* * * Section 3 - Composition / Information on Ingredients

CAS#	Component	Percent
7732-18-5	Water	94-97
7722-84-1	Hydrogen peroxide	3-6

Component Information/Information on Non-Hazardous Components

This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).

This is a controlled product according to Canada's Controlled Product Regulations.

* * * **Section 4 - First Aid Measures**

First Aid: Eyes

Immediately flush eyes with plenty of water for at least 15 minutes. After flushing eyes, call a physician.

First Aid: Skin

For skin contact flush with large amounts of water. Immediately take off all contaminated clothing. Wash contaminated clothing before reuse. If irritation persists, get medical attention.

First Aid: Ingestion

If the material is swallowed, get immediate medical attention or advice -- Do not induce vomiting.

First Aid: Inhalation

If inhaled, immediately remove the affected person to fresh air. If the affected person is not breathing, have a qualified individual apply artificial respiration. Call a physician immediately.

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* * * Section 5 - Fire Fighting Measures * * *

General Fire Hazards

See Section 9 for Flammability Properties.

Minor oxidizing agent. Higher concentrations may cause spontaneous ignition of combustible materials.

Hazardous Combustion Products

Oxygen.

Extinguishing Media

Dry chemical, foam, carbon dioxide, water fog.

Specific Hazards Arising From the Chemical

Product decomposes and will release oxygen thereby adding to the hazard of a fire. Product should be kept cool and in a vented container to avoid explosion hazards.

Fire Fighting Equipment/Instructions

Fire fighters should wear full-face, self contained breathing apparatus and impervious protective clothing. Fire fighters should avoid inhaling any combustion products.

NFPA Ratings: Health: 1 Fire: 0 Reactivity: 1

Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

* * * Section 6 - Accidental Release Measures * * *

Containment Procedures

Stop the flow of material, if this is without risk. Remove all sources of ignition.

Clean-Up Procedures

Ventilate the contaminated area. Wear appropriate protective equipment and clothing during clean-up. Absorb spill with inert material. Shovel material into appropriate container for disposal.

Evacuation Procedures

Isolate area. Keep unnecessary personnel away.

Special Procedures

Do not get this material in contact with skin or eyes.

* * * Section 7 - Handling and Storage * * *

Handling Procedures

Do not get this material in contact with skin or eyes. Do not inhale vapors or mists of this product. Keep container closed. Do not reuse the empty container.

Storage Procedures

Keep this material in a cool, well-ventilated place away from sunlight and incompatible materials. Do not freeze. Empty product containers may contain product residue. Do not reuse empty containers. Decomposes yielding oxygen that can cause pressure build-up if confined. Store in vented containers.

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Section 8 - Exposure Controls / Personal Protection

A: Component Exposure Limits

Hydrogen peroxide (7722-84-1)

ACGIH: 1 ppm TWA

OSHA: 1 ppm TWA; 1.4 mg/m3 TWA NIOSH: 1 ppm TWA; 1.4 mg/m3 TWA Alberta: 1 ppm TWA; 1.4 mg/m3 TWA

British Columbia: 1 ppm TWA

Manitoba: 1 ppm TWA; 1.5 mg/m3 TWA New Brunswick: 1 ppm TWA; 1.4 mg/m3 TWA NW Territories: 1 ppm TWA; 1.4 mg/m3 TWA 2 ppm STEL; 2.8 mg/m3 STEL

Nova Scotia: 1 ppm TWA

> 1 ppm TWA; 1.4 mg/m3 TWA Nunavut: 2 ppm STEL; 2.8 mg/m3 STEL

1 ppm TWAEV; 1.4 mg/m3 TWAEV Ontario: 1 ppm TWAEV; 1.4 mg/m3 TWAEV Quebec: Saskatchewan: 1.4 mg/m3 TWA; 1 ppm TWA 2.8 mg/m3 STEL; 2 ppm STEL

Yukon: 1 ppm TWA; 1.5 mg/m3 TWA 2 ppm STEL; 2.8 mg/m3 STEL

Engineering Controls

Use local exhaust ventilation.

PERSONAL PROTECTIVE EQUIPMENT Personal Protective Equipment: Eyes/Face

Wear chemical goggles; face shield (if splashing is possible).

Personal Protective Equipment: Skin

Use impervious gloves. Avoid the use of cotton or leather gloves.

Personal Protective Equipment: Respiratory

If ventilation is not sufficient to effectively prevent buildup of vapors, use appropriate NIOSH/MSHA respiratory protection.

Personal Protective Equipment: General

Eye wash fountain and emergency showers are recommended.

Section 9 - Physical & Chemical Properties

Appearance: Clear liquid Odor: Sharp/ pungent Physical State: Liquid pH: Not available Vapor Density: Vapor Pressure: Not available Not available **Melting Point: Boiling Point:** ~100°C (212°F) ~0°C (32°F) Solubility (H2O): Complete Specific Gravity: ~1.0 Evaporation Rate: Not available Octanol/H2O Coeff.: Not available Burning Rate: Not available Auto Ignition: Not available

Section 10 - Chemical Stability & Reactivity Information

Chemical Stability

Stable under controlled conditions of handling and storage. Product is a minor oxidizing agent. Product decomposes yielding oxygen that supports combustion of organic matter.

Chemical Stability: Conditions to Avoid

Product is a minor oxidizing agent - avoid contact with organic material and other incompatible materials.

Incompatibility

Organic materials, strong bases, reducing agents, heavy metals, copper alloys.

Hazardous Decomposition

Oxygen.

Possibility of Hazardous Reactions

Minimal with controlled conditions.

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* * * Section 11 - Toxicological Information * * *

Acute Dose Effects

A: General Product Information

Product can cause moderate to severe irritation or burns of eyes, skin and mucous membranes. Product can cause irritation of the gastrointestinal tract and respiratory tract. Contact with eyes may cause eye damage. Contact with skin may cause stinging pain or irritation. Ingestion/inhalation of large amounts may be harmful.

B: Component Analysis - LD50/LC50

Hydrogen peroxide (7722-84-1)

Inhalation LC50 Rat: 2 mg/L/4H; Oral LD50 Rat: 801 mg/kg; Dermal LD50 Rat: 4060 mg/kg; Dermal LD50 Rabbit: 2000 mg/kg

Carcinogenicity

A: General Product Information

No carcinogenicity data available for this product.

B: Component Carcinogenicity

Hydrogen peroxide (7722-84-1)

ACGIH: A3 - Confirmed animal carcinogen with unknown relevance to humans

IARC: Monograph 71, 1999; Supplement 7, 1987; Monograph 36, 1985 (Group 3 (not classifiable))

* * * Section 12 - Ecological Information * * *

Ecotoxicity

A: General Product Information

No data available for this product.

B: Component Analysis - Ecotoxicity - Aquatic Toxicity

Hydrogen peroxide (7722-84-1)

Test & Species

48 Hr LC50 carp 42 mg/L

* * * Section 13 - Disposal Considerations * * '

US EPA Waste Number & Descriptions

A: General Product Information

Wastes must be tested using methods described in 40 CFR Part 261 to determine if it meets applicable definitions of hazardous wastes.

Conditions

B: Component Waste Numbers

No EPA Waste Numbers are applicable for this product's components.

Disposal Instructions

Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. See Section 7 for Handling Procedures. See Section 8 for Personal Protective Equipment recommendations.

* * * Section 14 - Transportation Information * * *

US DOT Information

Shipping Name: Not regulated as a hazardous material.

TDG Information

Shipping Name: Not regulated as a dangerous good.

IATA/ICAO Information

Shipping Name: Not regulated as a dangerous good.

IMDG Information

Shipping Name: Not regulated as a dangerous good.

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* * * Section 15 - Regulatory Information * * *

US Federal Regulations

A: General Product Information

All components are on the U.S. EPA TSCA Inventory List.

B: Component Analysis

This material contains one or more of the following chemicals required to be identified under SARA Section 302 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65) and/or CERCLA (40 CFR 302.4).

Hydrogen peroxide (7722-84-1)

SARA 302: 1000 lb TPQ (concentration >52%)

Acute Health: Yes Chronic Health: No Fire: No Pressure: No Reactive: No

State Regulations

A: General Product Information

State and Provincial regulations may apply. Check individual requirements.

B: Component Analysis - State

The following components appear on one or more of the following state hazardous substances lists:

Component	CAS	CA	MA	MN	NJ	PA	RI
Hydrogen peroxide	7722-84-1	Yes	Yes	Yes	Yes	Yes	Yes

Canadian WHMIS Information

A: General Product Information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all information required by CPR.

All components in this product are listed on the Canadian Domestic Substances List (DSL).

B: Component Analysis - WHMIS IDL

The following components are identified under the Canadian Hazardous Products Act Ingredient Disclosure List:

Component	CAS#	Minimum Concentration
Hydrogen peroxide	7722-84-1	1 % (English Item 849, French
		Item 1365)

WHMIS Classification: Class C- Oxidizing Material

Class D2B- Toxic Material Additional Regulatory Information

A: General Product Information

No additional information available.

B: Component Analysis - Inventory

Component	CAS#	TSCA	CAN	EEC
Water	7732-18-5	Yes	DSL	EINECS
Hydrogen peroxide	7722-84-1	Yes	DSL	EINECS

* * * Section 16 - Other Information * * *

Other Information

No additional information available.

MSDS History

New MSDS: 24 August 2005.

Material Name: STERI-PEROX® Sterile ID: SP-98-01

Key/Legend

ACGIH = American Conference of Governmental Industrial Hygienists; CERCLA = Comprehensive Environmental Response, Compensation and Liability Act; CFR = Code of Federal Regulations; CNS = Central Nervous System; DSL = Domestic Substances List; EINECS = European Inventory of Existing Commercial Chemical Substances; EPA = Environmental Protection Agency; HEPA = High Efficiency Particulate Air filters; IARC = International Agency for Research on Cancer; LC50 = Lethal Concentration 50%; LD50 = Lethal Dose 50%; NIOSH = National Institute for Occupational Safety and Health; NJTSR = New Jersey Trade Secret Registry; NTP = National Toxicology Program; OSHA = Occupational Safety and Health Administration; PEL = Permissible Exposure Limit; RCRA = Resource Conservation and Recovery Act; SARA = Superfund Amendments and Reauthorization Act; STEL = Short Term Exposure Limit; TDG = Transport Dangerous Goods TSCA = Toxic Substance Control Act; TWA = Time Weighted Average; WHMIS = Workplace Hazardous Materials Information System.

This is the end of MSDS # SP-98-01

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