a member of the Roche Group

Material Safety Data Sheet

Material Name: OptiView H2O2 **MSDS ID: VEN-122**

* * * Section 1 - Chemical Product and Company Identification* * *

Manufacturer Information

VENTANA MEDICAL SYSTEMS INC.
1910 E. Innovation Park Drive
Tucson, AZ 85755
Phone: (520) 887-2155

EMERGENCY TELEPHONE NUMBER:
(800) 424-9300 (USA/Canada)
CHEMTREC: +1 (703) 527-3887 (International)

Material Name: OptiView H2O2

Product Number(s)

06395317001, 253-4583, 760-700

Product Use

clinical/research

* * * Section 2 - Hazards Identification* * *

NFPA Ratings: Health: 1 **Fire:** 0 **Reactivity:** 0
Hazard Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

Preparation

This material is not classified.

EMERGENCY OVERVIEW

Physical Form: liquid
Major Health Hazards: No significant target effects reported.

POTENTIAL HEALTH EFFECTS

Inhalation

Short Term: irritation
Long Term: no information on significant adverse effects

Skin

Short Term: irritation
Long Term: irritation

Eye

Short Term: irritation
Long Term: no information on significant adverse effects

Ingestion

Short Term: difficulty breathing, irregular heartbeat
Long Term: no information on significant adverse effects

OSHA Regulatory Status

This material is not considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

* * * Section 3 - Composition/Information on Ingredients* * *

CAS #	Component / EU Number	Percent	Symbol(s)	Risk Phrase(s)
Not Available	Non-hazardous	60-100	---	---
9002-92-0	BRIJ 35 500-002-6	<1	---	---
7722-84-1	Hydrogen peroxide 231-765-0	<0.1	O C	R:5-8-20/22-35

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

Inhalation

If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get immediate medical attention.

Skin

Wash contaminated areas with soap and water. Thoroughly clean and dry contaminated clothing before reuse. Get medical attention, if needed.

Eyes

Flush eyes with plenty of water for at least 15 minutes. Then get immediate medical attention.

Ingestion

If a large amount is swallowed, get medical attention.

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

See Section 9 for Flammability Properties

Flammable Properties

Negligible fire hazard.

Extinguishing Media

Use extinguishing agents appropriate for surrounding fire.

Protective Equipment and Precautions for Firefighters

Wear full protective fire fighting gear including self contained breathing apparatus (SCBA) for protection against possible exposure.

Fire Fighting Measures

Move container from fire area if it can be done without risk. Avoid inhalation of material or combustion by-products.

Sensitivity to Mechanical Impact

Not sensitive

Sensitivity to Static Discharge

Not sensitive

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

Occupational Spill/Release

Absorb with sand or other non-combustible material. Collect spilled material in appropriate container for disposal.

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

Handling Procedures

Wash thoroughly after handling.

Storage Procedures

Store and handle in accordance with all current regulations and standards. Keep separated from incompatible substances.

* * * Section 8 - Exposure Controls/Personal Protection* * *

Exposure Limits

Hydrogen peroxide (7722-84-1)

ACGIH:	1 ppm TWA
NIOSH:	1 ppm TWA; 1.4 mg/m3 TWA
	75 ppm IDLH
OSHA:	1 ppm TWA; 1.4 mg/m3 TWA
	1 ppm TWA; 1.4 mg/m3 TWA
Austria:	2 ppm STEL (8 X 5 min); 2.8 mg/m3 STEL (8 X 5 min)
	1 ppm MAK; 1.4 mg/m3 MAK
Belgium:	1 ppm TWA; 1.4 mg/m3 TWA
Denmark:	1 ppm TWA; 1.4 mg/m3 TWA
Finland:	3 ppm STEL; 4.2 mg/m3 STEL
	1 ppm TWA; 1.4 mg/m3 TWA
France:	1 ppm VME; 1.5 mg/m3 VME
Germany:	Group 1 (stabilized or aqueous solution, stabilized with >60% Hydrogen peroxide, UN2015); Group 2 (aqueous solution =>40% but<=60% Hydrogen peroxide, stabilized if necessary, UN2014); Group 3 (aqueous solution =>20% but <=40% Hydrogen peroxide, stabilized if necessary, UN2014); Group 4 (aqueous solution =>8% but <20% Hydrogen peroxide, stabilized if necessary, UN2984)
Germany (DFG):	0.5 ppm MAK; 0.71 mg/m3 MAK
	0.5 ppm Peak; 0.71 mg/m3 Peak
Greece:	3 mg/m3 STEL
	1 ppm TWA; 1.4 mg/m3 TWA
Ireland:	2 ppm STEL; 3 mg/m3 STEL
	1 ppm TWA; 1.5 mg/m3 TWA
Portugal:	1 ppm TWA
Spain:	1 ppm VLA-ED; 1.4 mg/m3 VLA-ED
Sweden:	1 ppm LLV; 1.4 mg/m3 LLV
	2 ppm CLV; 3 mg/m3 CLV
United Kingdom:	2 ppm STEL; 2.8 mg/m3 STEL
	1 ppm TWA; 1.4 mg/m3 TWA

Ventilation

Provide adequate ventilation. Ensure compliance with applicable exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

Eyes/Face

Safety glasses or goggles are recommended when there is a potential for eye contact. Provide an emergency eye wash fountain and quick drench shower in the immediate work area.

Protective Clothing

Lab coat or apron.

Glove Recommendations

Wear appropriate chemical resistant gloves.

Respiratory Protection

No respirator is required under normal conditions of use.

* * * Section 9 - Physical and Chemical Properties* * *

Physical State:	Liquid	**Appearance:**	liquid
Physical Form:	liquid	**Odor:**	Not available
Odor Threshold:	Not available	**pH:**	7.3
Decomposition:	Not available	**Flash Point:**	not flammable
Evaporation Rate:	Not available	**LEL:**	Not available
UEL:	Not available	**Vapor Pressure:**	Not available
Vapor Density (air = 1):	Not available	**Density:**	1.013 mg/L
Water Solubility:	miscible	**Log KOW:**	Not available
Coeff. Water/Oil Dist.:	Not available	**Auto Ignition:**	Not available
Viscosity:	Not available	**Volatility:**	Not available

* * * Section 10 - Stability and Reactivity* * *

Chemical Stability

Stable at normal temperatures and pressure.

Conditions to Avoid

None reported.

Materials to Avoid

acids, metals

Decomposition Products

oxides of phosphorus

Possibility of Hazardous Reactions

Will not polymerize.

* * * Section 11 - Toxicological Information* * *

Acute and Chronic Toxicity

Component Analysis - LD50/LC50

The components of this material have been reviewed in various sources and the following selected endpoints are published:

BRIJ 35 (9002-92-0)

Oral LD50 Rat 1 g/kg

Hydrogen peroxide (7722-84-1)

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

RTECS Acute Toxicity (selected)

The components of this material have been reviewed, and RTECS publishes the following endpoints:

BRIJ 35 (9002-92-0)

Oral: 1 gm/kg Oral Rat LD50; 8600 mg/kg Oral Rat LD50; 8600 mg/kg Oral Rat LD50; 4150 mg/kg Oral Rat LD50

Acute Toxicity Level

BRIJ 35 (9002-92-0)

Moderately Toxic: ingestion
Slightly Toxic: ingestion

Hydrogen peroxide (7722-84-1)

Highly Toxic: inhalation
Toxic: ingestion
Slightly Toxic: dermal absorption

Irritation/Corrosivity

RTECS Irritation

The components of this material have been reviewed, and RTECS publishes the following endpoints:

BRIJ 35 (9002-92-0)

6 mg/3 day(s) intermittent Skin Human moderate; 100 mg Eyes Rabbit; 10 mg Eyes Rabbit; 750 ug/24 hour Eyes Rabbit severe; 100 mg Skin Rabbit; 500 mg/24 hour Skin Rabbit mild; 75 mg/24 hour Skin Rabbit mild; 500 mg/24 hour Skin Rabbit moderate; 1 percent Skin Woman

Local Effects

BRIJ 35 (9002-92-0)

Irritant: eye

Hydrogen peroxide (7722-84-1)

Corrosive: inhalation, skin, eye, ingestion

Carcinogenicity

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))

Germany: Category 4 (no significant contribution to human cancer)

Portugal: A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans

Mutagenic

No data available for the mixture.

RTECS Mutagenic

The components of this material have been reviewed, and RTECS publishes data for one or more components.

Reproductive Effects

No data available for the mixture.

RTECS Reproductive Effects

The components of this material have been reviewed, and RTECS publishes data for one or more components.

Tumorigenic

No data available for the mixture.

RTECS Tumorigenic

The components of this material have been reviewed, and RTECS publishes data for one or more components.

Medical Conditions Aggravated by Exposure

None known.

* * * Section 12 - Ecological Information* * *

Component Analysis - Aquatic Toxicity

Hydrogen peroxide (7722-84-1)

Fish: 96 Hr LC50 Pimephales promelas: 16.4 mg/L; 96 Hr LC50 Lepomis macrochirus: 18-56 mg/L [static]; 96 Hr LC50 Oncorhynchus mykiss: 10.0-32.0 mg/L [static]

Algae: 72 Hr EC50 Chlorella vulgaris: 2.5 mg/L

Invertebrate: 24 Hr EC50 Daphnia magna: 7.7 mg/L; 48 Hr EC50 Daphnia magna: 18 - 32 mg/L [Static]

Mobility

No data available for the mixture.

Persistence & Degradation

No data available for the mixture.

Bioaccumulative Potential

No data available for the mixture.

* * * Section 13 - Disposal Considerations* * *

Disposal Methods

Dispose in accordance with all applicable regulations.

Component Waste Numbers

The U.S. EPA has not published waste numbers for this product's components.

* * * Section 14 - Transport Information* * *

US DOT Information

Not regulated.

TDG Information

Not regulated.

ADR Information

Not regulated.

RID Information

Not regulated.

IATA Information

Not regulated.

ICAO Information

Not regulated.

IMDG Information

Not regulated.

* * * Section 15 - Regulatory Information* * *

U.S. Federal Regulations

This material contains one or more of the following chemicals required to be identified under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), CERCLA (40 CFR 302.4), TSCA 12(b), and/or require an OSHA process safety plan.

Hydrogen peroxide (7722-84-1)

SARA 302/304: 1000 lb TPQ (concentration >52%)
1000 lb EPCRA RQ (concentration >52%)

OSHA (safety): 7500 lb TQ (>=52% by weight)

SARA 311/312

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

U.S. State Regulations

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

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

California Proposition 65

Not regulated under California Proposition 65

Canadian Regulations

Canada WHMIS

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

BRIJ 35 (9002-92-0)

1 %

Hydrogen peroxide (7722-84-1)

1 %

WHMIS Classification

Not a Controlled Product under Canada's Workplace Hazardous Material Information System.

European Regulations

This preparation has been classified for the European Union according to Annex VI Directives 67/548/EEC and 99/45/EC.

Germany Water Classification

BRIJ 35 (9002-92-0)

ID Number 670, hazard class 2 - hazard to waters

Hydrogen peroxide (7722-84-1)

ID Number 288, hazard class 1 - low hazard to waters (footnote 8)

EU Marking and Labelling
This material is not classified.
Japanese Regulations
Japan Designated Chemical Substances (PRTR Law)
The following components are subject to reporting requirements as specified by the "Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management" and are included in the "Pollutant Release and Transfer Register (PRTR)" of designated chemicals.
BRIJ 35 (9002-92-0)
407 1 %
Japan Poisonous and Deleterious Substances
The following components are specified as poisonous and deleterious substances, and are regulated by Japan under the Poisonous and Deleterious Substances Control Law.
Hydrogen peroxide (7722-84-1)
Deleterious, 6%; Deleterious
Industrial Safety and Health Law - Flammable Materials
The following components are identified in Table 6-2 of the Enforcement Order of the Industrial Safety and Health Law which, if used in the workplace, require designation of an Operations Chief during confined space work and periodic machine inspections.
Hydrogen peroxide (7722-84-1)
Oxidizing substance
Industrial Safety and Health Law - Label Disclosure
This list contains those harmful substances present in this product whose names are to be indicated on a container label as specified by Article 18 of the Enforcement Order of the Industrial Safety and Health Law.
Hydrogen peroxide (7722-84-1)
1 % weight
Industrial Safety and Health Law - Organic Solvents
No components of this material are specifically identified in Table 6-2 of the Enforcement Order of the Industrial Safety and Health Law which, if used in the workplace, require designation of an Operations Chief during confined space work and periodic machine inspections.

* * * Section 16 - Other Information* * *

Key / Legend
ACGIH - American Conference of Governmental Industrial Hygienists; ADR - European Road Transport; AU - Australia; BOD - Biochemical Oxygen Demand; C - Celsius; CA - Canada; CAS - Chemical Abstracts Service; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CN - China; CPR - Controlled Products Regulations; DFG - Deutsche Forschungsgemeinschaft; DOT - Department of Transportation; DSL - Domestic Substances List; EEC - European Economic Community; EINECS - European Inventory of Existing Commercial Chemical Substances; EPA - Environmental Protection Agency; EU - European Union; F - Fahrenheit; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; ICAO - International Civil Aviation Organization; IDL - Ingredient Disclosure List; IDLH - Immediately Dangerous to Life and Health; IMDG - International Maritime Dangerous Goods; JP - Japan; Kow - Octanol/water partition coefficient; KR - Korea; LEL - Lower Explosive Limit; LOLI - List Of LIsts™ - ChemADVISOR's Regulatory Database; MAK - Maximum Concentration Value in the Workplace; MEL - Maximum Exposure Limits; NFPA - National Fire Protection Agency; NIOSH - National Institute for Occupational Safety and Health; NJTSR - New Jersey Trade Secret Registry; NTP - National Toxicology Program; NZ - New Zealand; OSHA - Occupational Safety and Health Administration; PH - Philippines; RCRA - Resource Conservation and Recovery Act; RID - European Rail Transport; RTECS - Registry of Toxic Effects of Chemical Substances®; SARA - Superfund Amendments and Reauthorization Act; STEL - Short-term Exposure Limit; TDG - Transportation of Dangerous Goods; TSCA - Toxic Substances Control Act; TWA - Time Weighted Average; UEL - Upper Explosive Limit; US - United States
Full text of R phrases in Section 3
R5 Heating may cause an explosion.
R8 Contact with combustible material may cause fire.
R20/22 Harmful by inhalation and if swallowed.

R35 Causes severe burns.

Other Information

Limitations: The information and recommendations set forth in this MSDS are believed to be correct as of this date. Ventana Medical Systems, Inc. makes no warranty with respect to the content of this MSDS and disclaims all liability from reliance thereon.

New MSDS: 5/16/2011

End of Sheet VEN-122