a member of the Roche Group

Material Safety Data Sheet

Material Name: Decolorizer **MSDS ID: 00231377**

* * * 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: Decolorizer

Product Number(s)

860-024, 1504036, 5279399001, 06038247001, 860-005, 1504010, 5279216001, 06038000001

Product Use

clinical/research

* * * Section 2 - Hazards Identification * * *

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

Preparation

This material is not classified.

EMERGENCY OVERVIEW

Color: colorless
Physical Form: liquid
Odor: odorless
Major Health Hazards: respiratory tract irritation, skin irritation, eye irritation

POTENTIAL HEALTH EFFECTS

Inhalation

Short Term: irritation (possibly severe)
Long Term: no information on significant adverse effects

Skin

Short Term: irritation (possibly severe)
Long Term: irritation (possibly severe)

Eye

Short Term: irritation (possibly severe)
Long Term: irritation (possibly severe)

Ingestion

Short Term: irritation (possibly severe)
Long Term: no information on significant adverse effects

OSHA Regulatory Status

This material is 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	---	---
6153-56-6	OXALIC ACID, DIHYDRATE -	<1	Xn	R:21/22

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Oxalic acid (144-62-7).

* * * 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.

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. Store between 2 C and 30 C. See original container for storage recommendations. Keep separated from incompatible substances.

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

Exposure Limits

OXALIC ACID, DIHYDRATE (6153-56-6)

ACGIH:	1 mg/m3 TWA
	2 mg/m3 STEL
NIOSH:	1 mg/m3 TWA
	2 mg/m3 STEL
	500 mg/m3 IDLH
OSHA:	1 mg/m3 TWA
	2 mg/m3 STEL
	1 mg/m3 TWA
EEC:	1 mg/m3 TWA
Austria:	1 mg/m3 MAK (inhalable fraction)
	skin notation
Belgium:	2 mg/m3 STEL
	1 mg/m3 TWA
Denmark:	1 mg/m3 TWA
Finland:	3 mg/m3 STEL
	1 mg/m3 TWA
	Potential for cutaneous absorption
France:	1 mg/m3 VME (indicative limit)
Germany:	1 mg/m3 TWA (inhalable fraction, exposure factor 1)
Greece:	1 mg/m3 TWA
Ireland:	1 mg/m3 TWA
Italy:	1 mg/m3 TWA
Netherlands:	1 mg/m3 TWA
Portugal:	1 mg/m3 TWA
	2 mg/m3 STEL
Spain:	1 mg/m3 VLA-ED (indicative limit value)
Sweden:	1 mg/m3 LLV
	2 mg/m3 STV
United Kingdom:	2 mg/m3 STEL
	1 mg/m3 TWA

Ventilation

Provide local exhaust ventilation system. 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.

Protective Materials

latex, vinyl, nitrile

Respiratory Protection

No respirator is required under normal conditions of use.

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

Physical State:	Liquid	**Appearance:**	Clear, colorless liquid
Color:	colorless	**Physical Form:**	liquid
Odor:	odorless	**Odor Threshold:**	Not available
pH:	1.0-2.0	**Melting/Freezing Point:**	Not available
Boiling Point:	Not available	**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:	Not available	**Specific Gravity (water = 1):**	Not available
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, alkali metals, bases, metals

Decomposition Products

miscellaneous decomposition products

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:

OXALIC ACID, DIHYDRATE (6153-56-6)

Oral LD50 Rat 7500 mg/kg; Dermal LD50 Rat 20000 mg/kg

RTECS Acute Toxicity (selected)

The components of this material have been reviewed and RTECS publishes no data as of the date on this document.

Irritation/Corrosivity

See component data.

RTECS Irritation

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

OXALIC ACID, DIHYDRATE (6153-56-6)

250 ug/24 hour Eyes Rabbit severe; 100 mg/4 second(s) Eyes Rabbit severe; 500 mg/24 hour Skin Rabbit mild

Local Effects

OXALIC ACID, DIHYDRATE (6153-56-6)

Corrosive: inhalation, skin, eye, ingestion.

Target Organs

OXALIC ACID, DIHYDRATE (6153-56-6)

kidneys.

Carcinogenicity

Component Carcinogenicity

None of the substances in this preparation are listed by ACGIH, OSHA, NIOSH, NTP, IARC, Austria, Belgium, Denmark, France, Germany, Ireland, Italy, Netherlands, Portugal, Spain, Sweden, or United Kingdom.

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
OXALIC ACID, DIHYDRATE (6153-56-6)
Fish: 24 Hr LC50 Lepomis macrochirus: 4000 mg/L [static]
Invertebrate: 48 Hr EC50 Daphnia magna: 125 - 150 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. Subject to disposal regulations: U.S. EPA 40 CFR 262. Hazardous Waste Number(s): D002.
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
None of this products components are listed under SARA Sections 302/304 (40 CFR 355 Appendix A), SARA Section 313 (40 CFR 372.65), or CERCLA (40 CFR 302.4), TSCA 12(b), or require an OSHA process safety plan.
SARA 311/312
Acute Health: Yes **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
OXALIC ACID, DIHYDRATE (¹related to: Oxalic acid)	6153-56-6	Yes¹	Yes¹	Yes¹	Yes¹	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:

OXALIC ACID, DIHYDRATE (6153-56-6)

0.1 %

WHMIS Classification

D2B.

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

OXALIC ACID, DIHYDRATE (6153-56-6)

Number 166, hazard class 1 - low hazard to waters

EU Marking and Labelling

This material is not classified.

Japanese Regulations

Japan Designated Chemical Substances (PRTR Law)

No components of this material 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" nor are they included in the "Pollutant Release and Transfer Register (PRTR)" of designated chemicals.

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.

OXALIC ACID, DIHYDRATE (6153-56-6)

Deleterious, 10; Deleterious

Industrial Safety and Health Law - Flammable Materials

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.

Industrial Safety and Health Law - Label Disclosure

No components of this material are specifically required to be indicated on a container label as specified by Article 18 of the Enforcement Order of the Industrial Safety and Health Law.

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

R21/22 Harmful in contact with skin and if swallowed.

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.

MSDS Update: 11/4/2010

End of Sheet 00231377