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## Material Safety Data Sheet

Material Name: Alcian Blue

MSDS ID: 00231642

### \*\*\* 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:** Alcian Blue

#### Product Number(s)

860-002, 1504005, 5279186001, 06037950001

#### Product Use

clinical/research

### \*\*\* Section 2 - Hazards Identification \*\*\*

**NFPA Ratings:** Health: 2 Fire: 1 Reactivity: 0

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

#### Preparation

This material is not classified.

#### EMERGENCY OVERVIEW

**Color:** blue

**Physical Form:** liquid

**Odor:** vinegar odor

**Major Health Hazards:** harmful if inhaled, respiratory tract irritation, skin irritation, eye irritation

#### POTENTIAL HEALTH EFFECTS

##### Inhalation

**Short Term:** irritation, cough, difficulty breathing, loss of voice, lung congestion, changes in blood pressure

**Long Term:** irritation, digestive disorders

##### Skin

**Short Term:** irritation, skin disorders

**Long Term:** irritation, skin disorders

##### Eye

**Short Term:** irritation, tearing, eye damage, blindness

**Long Term:** irritation, tearing, eye damage, blindness

##### Ingestion

**Short Term:** irritation, vomiting, diarrhea, stomach pain, changes in body temperature, irregular heartbeat, difficulty breathing, loss of voice, lung congestion, blood disorders, convulsions

**Long Term:** irritation, vomiting, diarrhea, stomach pain, changes in body temperature, irregular heartbeat, difficulty breathing, loss of voice, lung congestion, blood disorders, convulsions

#### 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	---	---
64-19-7	ACETIC ACID 200-580-7	1-5	C	R:10-35

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75881-23-1	ALCIAN BLUE 8GX 278-333-8	0.5-1.5	---	---
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## Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Copper compounds, n.o.s..

### \* \* \* 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

Slight fire hazard.

#### Extinguishing Media

carbon dioxide, regular dry chemical, regular foam, water

#### Fire Fighting Measures

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

#### Hazardous Combustion Products

**Thermal decomposition or combustion products:** oxides of carbon, oxides of nitrogen, oxides of sulfur

#### Sensitivity to Mechanical Impact

Not sensitive

#### Sensitivity to Static Discharge

Not sensitive

### \* \* \* Section 6 - Accidental Release Measures \* \* \*

#### Occupational Spill/Release

Stop leak if possible without personal risk. **Small spills:** 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 15 C and 30 C. See original container for storage recommendations. Keep separated from incompatible substances.

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

### Exposure Limits

#### ACETIC ACID (64-19-7)

ACGIH:	10 ppm TWA 15 ppm STEL
NIOSH:	10 ppm TWA; 25 mg/m3 TWA 15 ppm STEL; 37 mg/m3 STEL 50 ppm IDLH
OSHA:	10 ppm TWA; 25 mg/m3 TWA 10 ppm TWA; 25 mg/m3 TWA
EEC:	10 ppm TWA; 25 mg/m3 TWA
Austria:	20 ppm STEL (8 X 5 min); 50 mg/m3 STEL (8 X 5 min) 10 ppm MAK; 25 mg/m3 MAK
Belgium:	15 ppm STEL; 38 mg/m3 STEL 10 ppm TWA; 25 mg/m3 TWA
Denmark:	10 ppm TWA; 25 mg/m3 TWA
Finland:	10 ppm STEL; 25 mg/m3 STEL 5 ppm TWA; 13 mg/m3 TWA
France:	10 ppm VLCT; 25 mg/m3 VLCT
Germany:	10 ppm TWA (exposure factor 2); 25 mg/m3 TWA (exposure factor 2) 10 ppm MAK; 25 mg/m3 MAK 20 ppm Peak; 50 mg/m3 Peak
Greece:	15 ppm STEL; 37 mg/m3 STEL 10 ppm TWA; 25 mg/m3 TWA
Ireland:	15 ppm STEL; 37 mg/m3 STEL 10 ppm TWA; 25 mg/m3 TWA
Japan:	10 ppm OEL; 25 mg/m3 OEL
Portugal:	10 ppm TWA 15 ppm STEL
Spain:	15 ppm VLA-EC; 37 mg/m3 VLA-EC 10 ppm VLA-ED; 25 mg/m3 VLA-ED
Sweden:	5 ppm LLV; 13 mg/m3 LLV 10 ppm STV; 25 mg/m3 STV

#### ALCIAN BLUE 8GX (75881-23-1)

ACGIH:	1 mg/m3 TWA (as Cu, dust and mist)
NIOSH:	1 mg/m3 TWA (as Cu, dust and mist) 100 mg/m3 IDLH (as Cu, dust and mist)
Austria:	4 mg/m3 STEL (inhalable fraction, 4 X 15 min); 0.4 mg/m3 STEL (as Cu, respirable fraction, smoke, 4 X 15 min) 1 mg/m3 MAK (as Cu, inhalable fraction); 0.1 mg/m3 MAK (as Cu, respirable fraction, smoke)
Finland:	1 mg/m3 TWA (as Cu)

### 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.

#### Protective Materials

latex, nitrile, vinyl

#### Respiratory Protection

No respirator is required under normal conditions of use.

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

<b>Physical State:</b>	Liquid	<b>Appearance:</b>	Clear, blue liquid
<b>Color:</b>	blue	<b>Physical Form:</b>	liquid
<b>Odor:</b>	vinegar odor	<b>Odor Threshold:</b>	Not available
<b>pH:</b>	2.3-2.7	<b>Melting/Freezing Point:</b>	Not available
<b>Boiling Point:</b>	Not available	<b>Decomposition:</b>	Not available
<b>Flash Point:</b>	not flammable	<b>Evaporation Rate:</b>	Not available
<b>LEL:</b>	Not available	<b>UEL:</b>	Not available
<b>Vapor Pressure:</b>	Not available	<b>Vapor Density (air = 1):</b>	Not available
<b>Density:</b>	Not available	<b>Specific Gravity (water = 1):</b>	Not available
<b>Water Solubility:</b>	miscible	<b>Log KOW:</b>	Not available
<b>Coeff. Water/Oil Dist.:</b>	Not available	<b>Auto Ignition:</b>	Not available
<b>Viscosity:</b>	Not available	<b>Volatility:</b>	Not available

## \*\*\* Section 10 - Stability and Reactivity \*\*\*

### Chemical Stability

Stable at normal temperatures and pressure.

### Conditions to Avoid

Avoid heat, flames, sparks and other sources of ignition. Avoid contact with incompatible materials.

### Materials to Avoid

acid anhydrides, acids, alcohols, amines, bases, carbonates, hydroxides, oxides, oxidizing materials, peroxides, permanganates, phosphates, sulfur

### Decomposition Products

**Thermal decomposition or combustion products:** oxides of carbon, oxides of nitrogen, oxides of sulfur

### 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:

#### ACETIC ACID (64-19-7)

Inhalation LC50 Rat 11.4 mg/L 4 h; Oral LD50 Rat 3310 mg/kg; Dermal LD50 Rabbit 1060 mg/kg

#### RTECS Acute Toxicity (selected)

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

#### ACETIC ACID (64-19-7)

**Inhalation:** 11000 mg/m<sup>3</sup>/4 hour Inhalation Rat LC50

**Oral:** 3310 mg/kg Oral Rat LD50

**Skin:** 1060 mg/kg Skin Rabbit LD50; 1060 uL/kg Skin Rabbit LD50

#### Acute Toxicity Level

#### ACETIC ACID (64-19-7)

**Toxic:** inhalation.

**Moderately Toxic:** dermal absorption, ingestion.

#### Irritation/Corrosivity

#### RTECS Irritation

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

#### ACETIC ACID (64-19-7)

50 mg/24 hour Skin Human mild; 5 mg/30 second(s) Eyes Rabbit mild; 50 mg/24 hour Skin Rabbit mild; 525 mg/open Skin Rabbit severe

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## Local Effects

### ACETIC ACID (64-19-7)

Corrosive: inhalation, skin, eye, ingestion.

## Carcinogenicity

### Component Carcinogenicity

#### ACETIC ACID (64-19-7)

Denmark: Present

## Mutagenic

No information 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 information 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 information 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

eye disorders, respiratory disorders, skin disorders and allergies

## \*\*\* Section 12 - Ecological Information \*\*\*

### Component Analysis - Aquatic Toxicity

#### ACETIC ACID (64-19-7)

Fish: 96 Hr LC50 Pimephales promelas: 79 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: 75 mg/L [static]

Invertebrate: 24 Hr EC50 Daphnia magna: 47 mg/L; 48 Hr EC50 Daphnia magna: 65 mg/L [Static]

## Mobility

No information available for the mixture.

## Persistence & Degradation

No information available for the mixture.

## Bioaccumulative Potential

No information 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.

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## \*\*\* 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.

#### ACETIC ACID (64-19-7)

CERCLA: 5000 lb final RQ; 2270 kg final RQ

#### ALCIAN BLUE 8GX (75881-23-1)

SARA 313: 1.0 % de minimis concentration (does not include copper phthalocyanine compounds substituted only with hydrogen and/or bromine and/or chlorine, Chemical Category N100)

### 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
ACETIC ACID	64-19-7	Yes	Yes	Yes	Yes	Yes	Yes
ALCIAN BLUE 8GX ('related to: Copper compounds, n.o.s.)	75881-23-1	Yes <sup>1</sup>	No	No	No	Yes <sup>1</sup>	No

### 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:

#### ACETIC ACID (64-19-7)

1 %

#### ALCIAN BLUE 8GX (75881-23-1)

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

#### ACETIC ACID (64-19-7)

Number 93, hazard class 1 - low hazard to waters

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## 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

No components of this material are specified as poisonous or deleterious substances, as regulated by Japan under the Poisonous and Deleterious Substances Control Law.

### 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.

#### ACETIC ACID (64-19-7)

Flammable substance

### 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

**R10** Flammable.

**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.

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