



a member of the Roche Group

Material Safety Data Sheet

Material Name: Congo Red Stain

MSDS ID: 00232103

*** 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: Congo Red Stain

Product Number(s)

860-026, 1502305, 5279429001, 06037879001

Product Use

clinical/research

*** Section 2 - Hazards Identification ***

NFPA Ratings: Health: 2 Fire: 3 Reactivity: 0

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

Preparation

F,Xi; R:11-36-67

Risks

Highly flammable.
Irritating to eyes.
Vapours may cause drowsiness and dizziness.

EMERGENCY OVERVIEW

Color: orange or red

Physical Form: liquid

Odor: odorless

Major Health Hazards: respiratory tract irritation, eye irritation, central nervous system depression

Physical Hazards: Flammable liquid and vapor. Vapor may cause flash fire.

POTENTIAL HEALTH EFFECTS

Inhalation

Short Term: irritation, chest pain, wheezing

Long Term: no information on significant adverse effects

Skin

Short Term: irritation, absorption may occur, changes in blood pressure, nausea, vomiting, irregular heartbeat, headache, drowsiness, dizziness, loss of coordination

Long Term: irritation

Eye

Short Term: irritation, eye damage

Long Term: irritation

Ingestion

Short Term: irritation, changes in blood pressure, nausea, vomiting, stomach pain, difficulty breathing, irregular heartbeat, headache, drowsiness, dizziness, disorientation, hallucinations, loss of coordination, internal bleeding, kidney damage, unconsciousness, coma

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).

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

CAS #	Component / EU Number	Percent	Symbol(s)	Risk Phrase(s)
67-63-0	ISOPROPYL ALCOHOL 200-661-7	60-100	F Xi	R:11-36-67
Not Available	NON-HAZARDOUS -	15-40	---	---
573-58-0	CONGO RED 209-358-4	<1	T Xn	R:45-63

Component Related Regulatory Information

This product may be regulated, have exposure limits or other information identified as the following: Benzidine compounds.

*** 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

Severe fire hazard. Vapor/air mixtures are explosive. The vapor is heavier than air. Vapors or gases may ignite at distant ignition sources and flash back.

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. Cool containers with water spray until well after the fire is out. Flood with fine water spray. Do not scatter spilled material with high-pressure water streams. Avoid inhalation of material or combustion by-products.

Hazardous Combustion Products

Thermal decomposition or combustion products: oxides of carbon

Sensitivity to Mechanical Impact

Not sensitive

Sensitivity to Static Discharge

Yes

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

Occupational Spill/Release

Avoid heat, flames, sparks and other sources of ignition. Stop leak if possible without personal risk. Reduce vapors with water spray. **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.

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Storage Procedures

Store and handle in accordance with all current regulations and standards. Store between 2 C and 8 C. Subject to storage regulations: U.S. OSHA 29 CFR 1910.106. Grounding and bonding required. See original container for storage recommendations. Keep separated from incompatible substances.

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

Exposure Limits

ISOPROPYL ALCOHOL (67-63-0)

ACGIH:	200 ppm TWA 400 ppm STEL 40 mg/L Medium: urine Time: end of shift at end of workweek Parameter: Acetone (background, nonspecific)
NIOSH:	400 ppm TWA; 980 mg/m3 TWA 500 ppm STEL; 1225 mg/m3 STEL 2000 ppm IDLH (10% LEL)
OSHA:	400 ppm TWA; 980 mg/m3 TWA 500 ppm STEL; 1225 mg/m3 STEL 400 ppm TWA; 980 mg/m3 TWA
Austria:	800 ppm STEL (4 X 15 min); 2000 mg/m3 STEL (4 X 15 min); 800 ppm STEL (STEL for large casting, 4 X 30 min); 2000 mg/m3 STEL (STEL for large casting, 4 X 30 min) 200 ppm MAK; 500 mg/m3 MAK (short time value for large casting)
Belgium:	400 ppm STEL; 1000 mg/m3 STEL 200 ppm TWA; 500 mg/m3 TWA
Denmark:	200 ppm TWA; 490 mg/m3 TWA
Finland:	250 ppm STEL; 620 mg/m3 STEL 200 ppm TWA; 500 mg/m3 TWA
France:	400 ppm VLCT; 980 mg/m3 VLCT
Germany:	200 ppm TWA (exposure factor 2); 500 mg/m3 TWA (exposure factor 2) 50 mg/L Medium: whole blood Time: end of shift Parameter: Acetone; 50 mg/L Medium: urine Time: end of shift Parameter: Acetone 200 ppm MAK; 500 mg/m3 MAK 400 ppm Peak; 1000 mg/m3 Peak
Greece:	500 ppm STEL; 1225 mg/m3 STEL 400 ppm TWA; 980 mg/m3 TWA
Ireland:	400 ppm STEL 200 ppm TWA Potential for cutaneous absorption
Japan	400 ppm Ceiling; 980 mg/m3 Ceiling
Portugal:	200 ppm TWA 400 ppm STEL
Spain:	500 ppm VLA-EC; 1250 mg/m3 VLA-EC 400 ppm VLA-ED; 998 mg/m3 VLA-ED
Sweden:	150 ppm LLV; 350 mg/m3 LLV 250 ppm STV; 600 mg/m3 STV
United Kingdom:	500 ppm STEL; 1250 mg/m3 STEL 400 ppm TWA; 999 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.

Protective Materials

latex, vinyl, nitrile

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Respiratory Protection

No respirator is required under normal conditions of use.

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

Physical State:	Liquid	Appearance:	Orange or red liquid
Color:	orange or red	Physical Form:	liquid
Odor:	odorless	Odor Threshold:	Not available
pH:	10.0	Melting/Freezing Point:	Not available
Boiling Point:	81 - 83 °C	Decomposition:	Not available
Flash Point:	12.0 °C	Evaporation Rate:	Not available
OSHA Flammability Class:	IB	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

Avoid heat, flames, sparks and other sources of ignition. Containers may rupture or explode if exposed to heat.
Keep out of water supplies and sewers.

Materials to Avoid

acid anhydrides, acids, aluminum, halogens, oxidizing materials

Decomposition Products

Thermal decomposition or combustion products: oxides of carbon

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:

ISOPROPYL ALCOHOL (67-63-0)

Inhalation LC50 Rat 72.6 mg/L 4 h; Oral LD50 Rat 4396 mg/kg; Dermal LD50 Rat 12800 mg/kg; Dermal LD50 Rabbit 12870 mg/kg

CONGO RED (573-58-0)

Oral LD50 Rat 15200 mg/kg

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RTECS Acute Toxicity (selected)

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

ISOPROPYL ALCOHOL (67-63-0)

Inhalation: 16000 ppm/8 hour Inhalation Rat LC50; 72600 mg/m3 Inhalation Rat LC50

Oral: 5000 mg/kg Oral Rat LD50; 5045 mg/kg Oral Rat LD50

Skin: 12800 mg/kg Skin Rabbit LD50

CONGO RED (573-58-0)

Oral: 15200 mg/kg Oral Rat LD50

Acute Toxicity Level

ISOPROPYL ALCOHOL (67-63-0)

Moderately Toxic: inhalation, ingestion.

Slightly Toxic: dermal absorption.

CONGO RED (573-58-0)

Non Toxic: ingestion.

Irritation/Corrosivity

RTECS Irritation

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

ISOPROPYL ALCOHOL (67-63-0)

10 mg Eyes Rabbit moderate; 100 mg/24 hour Eyes Rabbit moderate; 100 mg Eyes Rabbit severe; 500 mg Skin Rabbit mild

CONGO RED (573-58-0)

100 mg Eyes Rabbit moderate

Local Effects

ISOPROPYL ALCOHOL (67-63-0)

Irritant: inhalation, eye.

CONGO RED (573-58-0)

Irritant: inhalation, skin, eye.

Target Organs

ISOPROPYL ALCOHOL (67-63-0)

central nervous system.

Carcinogenicity

Component Carcinogenicity

ISOPROPYL ALCOHOL (67-63-0)

ACGIH: A4 - Not Classifiable as a Human Carcinogen

IARC: Monograph 71 [1999]; Supplement 7 [1987]; Monograph 15 [1977] (Group 3 (not classifiable))

Portugal: A4 - Not Classifiable as a Human Carcinogen

CONGO RED (573-58-0)

Denmark: Present

Italy: Category 2 Carcinogen

Netherlands: Present

Spain: Suspected human carcinogen

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.

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Medical Conditions Aggravated by Exposure

kidney disorders, liver disorders, respiratory disorders, skin disorders and allergies

*** Section 12 - Ecological Information ***

Component Analysis - Aquatic Toxicity

ISOPROPYL ALCOHOL (67-63-0)

Fish: 96 Hr LC50 Pimephales promelas: 9640 mg/L [flow-through]; 96 Hr LC50 Pimephales promelas: 11130 mg/L [static]; 96 Hr LC50 Lepomis macrochirus: >1400000 µg/L

Algae: 96 Hr EC50 Desmodesmus subspicatus: >1000 mg/L; 72 Hr EC50 Desmodesmus subspicatus: >1000 mg/L

Invertebrate: 48 Hr EC50 Daphnia magna: 13299 mg/L

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. Subject to disposal regulations: U.S. EPA 40 CFR 262.

Hazardous Waste Number(s): D001.

Component Waste Numbers

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

*** Section 14 - Transport Information ***

US DOT Information

Shipping Name: Isopropanol, Mixture

UN/NA #: UN1219 **Hazard Class:** 3 **Packing Group:** II

Required Label(s): 3

TDG Information

Shipping Name: Isopropanol, Mixture

UN #: UN1219 **Hazard Class:** 3 **Packing Group:** II

Required Label(s): 3

ADR Information

Shipping Name: Isopropanol, Mixture

UN #: UN1219 **Hazard Class:** 3 **Packing Group:** II

Required Label(s): 3

RID Information

Shipping Name: Isopropanol, Mixture

UN #: UN1219 **Hazard Class:** 3 **Packing Group:** II

Required Label(s): 3

IATA Information

Shipping Name: Isopropyl alcohol, Mixture

UN #: UN1219 **Hazard Class:** 3 **Packing Group:** II

Required Label(s): 3

ICAO Information

Shipping Name: Isopropyl alcohol, Mixture

UN #: UN1219 **Hazard Class:** 3 **Packing Group:** II

Required Label(s): 3

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IMDG Information

Shipping Name: Isopropanol, Mixture

UN #: UN1219 **Hazard Class:** 3 **Packing Group:** II

Required Label(s): 3

*** 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.

ISOPROPYL ALCOHOL (67-63-0)

SARA 313: 1.0 % de minimis concentration (only if manufactured by the strong acid process, no supplier notification)

CONGO RED (573-58-0)

TSCA 12b: Section 5, 1 %

SARA 311/312

Acute Health: Yes **Chronic Health:** No **Fire:** Yes **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
ISOPROPYL ALCOHOL	67-63-0	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:

ISOPROPYL ALCOHOL (67-63-0)

1 %

WHMIS Classification

B2, 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

ISOPROPYL ALCOHOL (67-63-0)

Number 135, hazard class 1 - low hazard to waters

EU Marking and Labelling

Symbols

F Highly flammable

Xi Irritant

Risk Phrases

R11 Highly flammable.

R36 Irritating to eyes.

R67 Vapours may cause drowsiness and dizziness.

Safety Phrases

S9 Keep container in a well-ventilated place.

S16 Keep away from sources of ignition - No smoking.

S25 Avoid contact with eyes.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S51 Use only in well ventilated areas.

S60 This material and its container must be disposed of as hazardous waste.

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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

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

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.

ISOPROPYL ALCOHOL (67-63-0)

1 % weight

Industrial Safety and Health Law - Organic Solvents

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.

ISOPROPYL ALCOHOL (67-63-0)

Class 2

*** 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

R11 Highly flammable.

R36 Irritating to eyes.

R45 May cause cancer.

R63 Possible risk of harm to the unborn child.

R67 Vapours may cause drowsiness and dizziness.

Other Information

Limitations: The information and recommendations set forth in this MSDS are believed to be

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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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MSDS Update: 10/15/2010

End of Sheet 00232103