

Material Safety Data Sheet
Carbol Fuchsin Stain**Section 1 - Chemical Product and Company Identification****MSDS Name:**

Carbol Fuchsin Stain

Catalog Numbers:

88001

Synonyms:

None Known.

Company Identification:Richard Allan Scientific
4481 Campus Drive
Kalamazoo, MI 49008**Company Phone Number:**

800-522-7270

Emergency Phone Number:

800-424-9300

CHEMTREC Phone Number, US:

(800) 424-9300

CHEMTREC Phone Number, Europe:

(202) 483-7616

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	Percent	EINECS/ ELINCS	Hazard Symbols	Risk Phrases
7732-18-5	Deionized Water	73-75	231-791-2		
56-81-5	Glycerine	9-10	200-289-5		
64-17-5	Ethyl alcohol	7-10	200-578-6	F	11
108-95-2	Phenol	4-5	203-632-7	T	24/25 34
632-99-5	Basic Fuchsin Dye	1-2	211-189-6		
67-56-1	Methyl alcohol	<1.0	200-659-6	F T	11 23/24/25 39/23/24/25
67-63-0	Isopropyl alcohol	<1.0	200-661-7	F XI	11 36 67

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Carbol Fuchsin Stain**Section 3 - Hazards Identification****EMERGENCY OVERVIEW**

Appearance: Red liquid

Danger! Causes eye and skin burns. Causes digestive and respiratory tract burns. Flammable liquid and vapor. Readily absorbed through the skin. This substance has caused adverse reproductive and fetal effects in humans. Cancer hazard. May cause central nervous system depression. May cause liver, kidney and heart damage. Flash Point: 99°F.

Target Organs: Blood, Kidneys, Heart, Central nervous system, Liver, Eyes, Skin

Potential Health Effects**Eye:**

Contact with liquid or vapor causes severe burns and possible irreversible eye damage.

Skin:

Causes skin burns. May cause cyanosis of the extremities.

Ingestion:

May cause liver and kidney damage. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. May cause perforation of the digestive tract. Causes digestive tract burns with immediate pain, swelling of the throat, convulsions, and possible coma. Methemoglobinemia is characterized by dizziness, drowsiness, headache, shortness of breath, cyanosis (bluish discoloration of skin due to deficient oxygenation of the blood), rapid heart rate and chocolate-brown colored blood. Overexposure may cause methemoglobinemia. May cause cardiac abnormalities.

Inhalation:

Causes chemical burns to the respiratory tract. Aspiration may lead to pulmonary edema. Vapors may cause dizziness or suffocation. May also cause pallor, loss of appetite, nausea, vomiting, diarrhea, weakness, darkened urine, headache, sweating, convulsions, cyanosis (bluish skin due to deficient oxygenation of the blood), unconsciousness, fatigue, pulmonary edema & coma. Inhalation at high concentrations may cause CNS depression and asphyxiation.

Chronic:

Chronic inhalation and ingestion may cause effects similar to those of acute inhalation and ingestion. May cause reproductive and fetal effects. Effects may be delayed. Laboratory experiments have resulted in mutagenic effects. Repeated skin contact may cause dermatitis with dark pigmentation of the skin. Prolonged exposure may cause liver, kidney, and heart damage.

Section 4 - First Aid Measures**Eyes:**

Get medical aid immediately. Do NOT allow victim to rub eyes or keep eyes closed. Extensive irrigation with water is required (at least 30 minutes).

Skin:

Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Discard contaminated clothing in a manner which limits further exposure.

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Do not induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation:

Get medical aid immediately. Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Do NOT use mouth-to-mouth resuscitation. If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician:

Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures**General Information:**

As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors can travel to a source of ignition and flash back. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Containers may explode when heated. Runoff from fire control or dilution water may cause pollution.

Extinguishing Media:

In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam.

Autoignition Temperature:

Not available

Explosion Limits:

Lower: Not available Upper: Not available

Flash Point:

99°F (37.22°C)

NFPA Rating:

(estimated) Health: 3; Flammability: 3; Instability: 0

Section 6 - Accidental Release Measures**General Information:**

Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

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Section 7 - Handling and Storage
Handling:

Wash thoroughly after handling. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Do not ingest or inhale. Store protected from light. Use only in a chemical fume hood. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage:

Keep away from sources of ignition. Store in a cool, dry place. Keep container closed when not in use. Keep from contact with oxidizing materials. Flammables-area.

Section 8 - Exposure Controls, Personal Protection
Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Exposure Limits

Chemical Name:	ACGIH	NIOSH	OSHA
Deionized Water	None listed	None listed	None listed
Glycerine	10 mg/m3 TWA (mist)	None listed	15 mg/m3 TWA (total); 5 mg/m3 TWA (respirable fraction); 1000 ppm TWA; 1900 mg/m3 TWA;
Ethyl alcohol	1000 ppm TWA	1000 ppm TWA; 1900 mg/m3 TWA 3300 ppm IDLH (10% LEL)	1000 ppm TWA; 1900 mg/m3 TWA;
Phenol	5 ppm TWA; Skin - potential significant contribution to overall exposure by the cutaneous route	5 ppm TWA; 19 mg/m3 TWA 250 ppm IDLH 15.6 ppm Ceiling (15 min); 60 mg/m3 Ceiling (15 min)	5 ppm TWA; 19 mg/m3 TWA; prevent or reduce skin absorption;
Basic Fuchsin Dye	None listed	None listed	None listed
Methyl alcohol	200 ppm TWA; 250 ppm STEL; Skin - potential significant contribution to overall exposure by the cutaneous route	200 ppm TWA; 260 mg/m3 TWA 6000 ppm IDLH	200 ppm TWA; 260 mg/m3 TWA;
Isopropyl alcohol	200 ppm TWA; 400 ppm STEL	400 ppm TWA; 980 mg/m3 TWA 2000 ppm IDLH (10% LEL)	400 ppm TWA; 980 mg/m3 TWA;

OSHA Vacated PELs

Glycerine: 10 mg/m3 TWA (total dust); 5 mg/m3 TWA (respirable fraction)
 Ethyl alcohol: 1000 ppm TWA; 1900 mg/m3 TWA
 Phenol: 5 ppm TWA; 19 mg/m3 TWA
 Methyl alcohol: 200 ppm TWA; 260 mg/m3 TWA
 Isopropyl alcohol: 400 ppm TWA; 980 mg/m3 TWA

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Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin:

Wear appropriate protective gloves to prevent skin exposure.

Clothing:

Wear appropriate protective clothing to prevent skin exposure.

Respirators:

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Color: Red

Odor: No information found

pH: No information found

Vapor Pressure: No information found

Vapor Density: 1.3 (Air = 1)

Evaporation Rate: 1.13 (Butyl acetate = 1)

Viscosity: No information found

Boiling Point: > 100°C

Freezing/Melting Point: No information found

Decomposition Temperature: No information found

Solubility in water: Soluble.

Specific Gravity/Density: 0.975 @ 21°C

Molecular Formula: Solution

Molecular Weight: No information found

Section 10 - Stability and Reactivity**Chemical Stability:**

Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials, ignition sources, excess heat

Incompatibilities with Other Materials

Oxidizing agents, acids, bases, aluminum, halogens, magnesium, nitric acid, zinc, calcium hypochlorite, lead, acid chlorides

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide

Hazardous Polymerization

Will not occur.

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Section 11 - Toxicological Information

RTECS:

CAS# 7732-18-5: ZC0110000
CAS# 56-81-5: MA8050000
CAS# 64-17-5: KQ6300000
CAS# 108-95-2: SJ3325000
CAS# 632-99-5: CX9850000
CAS# 67-56-1: PC1400000
CAS# 67-63-0: NT8050000

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CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/kg.

CAS# 56-81-5:

Draize test, rabbit, eye: 126 mg Mild

Draize test, rabbit, eye: 500 mg/24H Mild

Draize test, rabbit, skin: 500 mg/24H Mild

Inhalation, rat: LC50 = >570 mg/m³/1H

Oral, mouse: LD50 = 4090 mg/kg

Oral, rabbit: LD50 = 27 gm/kg

Oral, rat: LD50 = 12600 mg/kg

Skin, rabbit: LD50 = >10 gm/kg.

CAS# 64-17-5:

Draize test, rabbit, eye: 500 mg Severe

Draize test, rabbit, eye: 500 mg/24H Mild

Draize test, rabbit, skin: 20 mg/24H Moderate

Inhalation, mouse: LC50 = 39 gm/m³/4H

Inhalation, rat: LC50 = 20000 ppm/10H

Oral, mouse: LD50 = 3450 mg/kg

Oral, rabbit: LD50 = 6300 mg/kg

Oral, rat: LD50 = 7060 mg/kg

Oral, rat: LD50 = 9000 mg/kg.

CAS# 108-95-2:

Draize test, rabbit, eye: 5 mg Severe

Draize test, rabbit, skin: 500 mg/24H Severe

Draize test, rabbit, skin: 100 mg Mild

Inhalation, mouse: LC50 = 177 mg/m³Inhalation, mouse: LC50 = 177 mg/m³/4HInhalation, rat: LC50 = 316 mg/m³Inhalation, rat: LC50 = 316 mg/m³/4H

Oral, mouse: LD50 = 270 mg/kg

Oral, rat: LD50 = 317 mg/kg

Oral, rat: LD50 = 512 mg/kg

Skin, rabbit: LD50 = 630 mg/kg

Skin, rat: LD50 = 669 mg/kg

Skin, rat: LD50 = 1500 mg/kg.

CAS# 632-99-5:

No information found

CAS# 67-56-1:

Draize test, rabbit, eye: 40 mg Moderate

Draize test, rabbit, eye: 100 mg/24H Moderate

Draize test, rabbit, skin: 20 mg/24H Moderate

Inhalation, rabbit: LC50 = 81000 mg/m³/14H

Inhalation, rat: LC50 = 64000 ppm/4H

Oral, mouse: LD50 = 7300 mg/kg

Oral, rabbit: LD50 = 14200 mg/kg

Carcinogenicity:

CAS# 7732-18-5: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 56-81-5: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 64-17-5

ACGIH: Not listed

California: Not listed

NTP: Not listed

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IARC: Group 1 carcinogen
CAS# 108-95-2: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 632-99-5
ACGIH: Not listed
California: Not listed
NTP: Not listed
IARC: Group 2B carcinogen
CAS# 67-56-1: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 67-63-0: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology:

The predominant acute action of a toxic dose of phenol in man appears to be to the central nervous system, leading to sudden collapse and unconsciousness. Ethanol has been shown to produce fetotoxicity in the embryo or fetus of laboratory animals. Prenatal exposure to ethanol is associated with a distinct pattern of congenital malformations that have collectively been termed the "fetal alcohol syndrome".

Teratogenicity:

Oral, Human - woman: TDLo = 41 gm/kg (female 41 week(s) after conception) Effects on Newborn - Apgar score (human only) and Effects on Newborn - other neonatal measures or effects and Effects on Newborn - drug dependence.

Reproductive:

Intrauterine, Human - woman: TDLo = 200 mg/kg (female 5 day(s) pre-mating) Fertility - female fertility index (e.g. # females pregnant per # sperm positive females; # females pregnant per # females mated).

Mutagenicity:

DNA Inhibition: Human, Lymphocyte = 220 mmol/L.; Cytogenetic Analysis: Human, Lymphocyte = 1160 gm/L.; Cytogenetic Analysis: Human, Fibroblast = 12000 ppm.; Cytogenetic Analysis: Human, Leukocyte = 1 pph/72H (Continuous); Sister Chromatid Exchange: Human, Lymphocyte = 500 ppm/72H (Continuous).

Neurotoxicity:

No information found

Other:

Standard Draize Test: Administration onto the skin (rabbit) = 500 mg/24H (Severe). Standard Draize Test: Administration into the eye (rabbit) = 5 mg (Severe). Phenol is not considered carcinogenic to rats or mice following oral exposure in drinking water. It was found to be a promotor of skin cancer in mice. Standard Draize Test (Skin, rabbit) = 20 mg/24H (Moderate) Standard Draize Test: Administration into the eye (rabbit) = 500 mg (Severe).

Section 12 - Ecological Information**Ecotoxicity:**

Water flea Daphnia: EC50=12 mg/l; 48-hour; CAS# 108-95-2: Unspecified
Water flea Daphnia: EC50=4.0 mg/l; 96-hour; CAS# 108-95-2: Unspecified
Fish: Fathead Minnow: LC50 > 50 mg/l; 1 Hr; CAS# 108-95-2 Static @ 18-22°C
Fish: Fathead Minnow: TLm = 41 mg/L; 48-hour; CAS# 108-95-2: Flow-through @ 15°C
Fish: Bluegill/Sunfish: TLm = 19 / 5.7 mg/L; 96 Hr; CAS# 108-95-2: Flow-through
Fish: Rainbow trout: LC50 = 12900-15300 mg/L; 96 Hr; Flow-through @ 24-24.3°C
Fish: Rainbow trout: LC50 = 11200 mg/L; 24 Hr; Fingerling (Unspecified)
Bacteria: Phytobacterium phosphoreum: EC50 = 34900 mg/L; 5-30 min; Microtox test

When spilled on land it is apt to volatilize, biodegrade, and leach into the ground water, but no data on the rates of these processes could be found. Its fate in ground water is unknown. When released into water it will volatilize and probably biodegrade. It would not be expected to adsorb to sediment or bioconcentrate in fish.

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When released to the atmosphere it will photodegrade in hours (polluted urban atmosphere) to an estimated range of 4 to 6 days in less polluted areas. Rainout should be significant.

Physical:

No information found

Other:

No information found

Section 13 - Disposal Considerations

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Part 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P Series Wastes

None of the components are on this list.

RCRA U Series Wastes

CAS# 108-95-2: waste number U188. CAS# 67-56-1: waste number U154 (Ignitable waste).

Section 14 - Transport Information**US DOT**

Proper Shipping Name: FLAMMABLE
LIQUID,
N.O.S. (Ethanol,
Phenol)
Hazard Class: 3
UN Number: UN1993
Packing Group: III

USA RQ: CAS# 108-95-2: 1000 lb final RQ; 454 kg final RQ

USA RQ: CAS# 67-56-1: 5000 lb final RQ; 2270 kg final RQ

Canadian TDG

FLAMMABLE
LIQUID,
N.O.S. (Ethanol,
Phenol)
3
UN1992
III

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CAS# 7732-18-5 is listed on the TSCA Inventory.
CAS# 56-81-5 is listed on the TSCA Inventory.
CAS# 64-17-5 is listed on the TSCA Inventory.
CAS# 108-95-2 is listed on the TSCA Inventory.
CAS# 632-99-5 is listed on the TSCA Inventory.
CAS# 67-56-1 is listed on the TSCA Inventory.
CAS# 67-63-0 is listed on the TSCA Inventory.

Health and Safety Reporting List

CAS# 108-95-2: Effective 6/1/87, Sunset 6/1/97
CAS# 67-63-0: Effective 12/15/86, Sunset 12/15/96

Chemical Test Rules

CAS# 67-63-0: 40 CFR 799.2325

TSCA Section 12b

None of the components are on this list.

TSCA Significant New Use Rule (SNUR)

None of the components are on this list.

CERCLA Hazardous Substances and corresponding RQs

CAS# 108-95-2: 1000 lb final RQ; 454 kg final RQ
CAS# 67-56-1: 5000 lb final RQ; 2270 kg final RQ

SARA Section 302 Extremely Hazardous Substances

CAS# 108-95-2: 500 lb lower threshold TPQ; 10000 lb upper threshold TPQ

SARA Hazard Categories

CAS# 56-81-5: delayed.
CAS# 64-17-5: immediate, delayed, fire.
CAS# 108-95-2: immediate, delayed, fire.
CAS# 67-56-1: immediate, fire.
CAS# 67-63-0: immediate, delayed, fire.

SARA Section 313

This material contains Phenol (CAS# 108-95-2, 4-5%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 372.

Methyl alcohol is not at a high enough concentration to be reportable under Section 313.

Isopropyl alcohol is not at a high enough concentration to be reportable under Section 313.

Clean Air Act - Hazardous Air Pollutants (HAPs)

CAS# 108-95-2 is listed as a hazardous air pollutant (HAP).
CAS# 67-56-1 is listed as a hazardous air pollutant (HAP).

Clean Air Act - Class 1 Ozone Depletors

None of the components are on this list.

Clean Air Act - Class 2 Ozone Depletors

None of the components are on this list.

Clean Water Act - Hazardous Substances

CAS# 108-95-2 is listed as a Hazardous Substance under the CWA.

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CAS# 108-95-2 is listed as a Priority Pollutant under the CWA.

Clean Water Act - Toxic Pollutants

CAS# 108-95-2 is listed as a Toxic Pollutant under the CWA.

OSHA - Highly Hazardous

None of the components are on this list.

OSHA - Specifically Regulated Chemicals

None of the components are on this list.

US State**State Right to Know**

Glycerine can be found on the following state Right-to-Know lists: New Jersey, Pennsylvania, Minnesota, Massachusetts.

Ethyl alcohol can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

Phenol can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

Methyl alcohol can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

Isopropyl alcohol can be found on the following state Right-to-Know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

None of the components are on this list.

California No Significant Risk Level

None of the components are on this list.

None of the components are on this list.

None of the components are on this list.

None of the components are on this list.

None of the components are on this list.

None of the components are on this list.

None of the components are on this list.

European/International Regulations**European Labelling in Accordance with EC Directives:**

Hazard Symbols: C

Risk Phrases: R 10 Flammable.

R 20/21/22 Harmful by inhalation, in contact with skin and if swallowed.

R 34 Causes burns.

R 40 Limited evidence of a carcinogenic effect.

R 68 Possible risk of irreversible effects.

Safety Phrases: S 7 Keep container tightly closed.

S 16 Keep away from sources of ignition - No smoking.

S 24/25 Avoid contact with skin and eyes.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S 28 After contact with skin, wash immediately with soap and water.

S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.

S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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No information found

United Kingdom Occupational Exposure Limits

No information found

United Kingdom Maximum Exposure Limits

No information found

Canadian DSL/NDL

CAS# 7732-18-5 is listed on Canada's DSL List.

CAS# 56-81-5 is listed on Canada's DSL List.

CAS# 64-17-5 is listed on Canada's DSL List.

CAS# 108-95-2 is listed on Canada's DSL List.

CAS# 632-99-5 is listed on Canada's DSL List.

CAS# 67-56-1 is listed on Canada's DSL List.

CAS# 67-63-0 is listed on Canada's DSL List.

Canadian WHMIS Classifications

This product has a WHMIS classification of B3, D2A, E, D1A.

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

Canadian Ingredient Disclosure List

CAS# 64-17-5 is listed on the Canadian Ingredient Disclosure List.

CAS# 108-95-2 is listed on the Canadian Ingredient Disclosure List.

CAS# 67-56-1 is listed on the Canadian Ingredient Disclosure List.

CAS# 67-63-0 is listed on the Canadian Ingredient Disclosure List.

Section 16 - Other Information

No information found

MSDS Creation Date: December 4, 2006

Revision Date: August 14, 2008

Revisions were made in Sections:

5, 9, 14

This MSDS is intended for review and guidance in the receipt, storage, handling, use and disposal of product purchased from us, and for no other purpose. Use this product only as directed and in accordance with applicable instructions and warnings provided with the product. Please consult your institution's policies regarding use of this product. If you have obtained this

MSDS other than in connection with the supply of this product from us, this MSDS should be consulted for general information only, and should not be relied upon for any purpose. As with the use of all hazardous materials, you should in all instances follow the guidance of the MSDS provided or available with the specific product purchased.