

Material Safety Data Sheet

Crystal Violet Solution

Section 1 - Chemical Product and Company Identification

MSDS Name:

Crystal Violet Solution

Catalog Numbers:

23255960

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	Water	85+	231-791-2		
64-17-5	Ethanol	<12	200-578-6	F	11
67-56-1	Methanol	<1	200-659-6	F T	11 23/24/25 39/23/24/25
108-95-2	Phenol	<1	203-632-7	T	24/25 34
548-62-9	Crystal Violet	0.4	208-953-6		

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Crystal Violet Solution**Section 3 - Hazards Identification****EMERGENCY OVERVIEW**

Appearance: Purple liquid

Warning! Flammable liquid and vapor. Causes eye irritation. May cause skin and respiratory tract irritation. May cause central nervous system depression. May cause liver and kidney damage. May cause reproductive and fetal effects. Flash Point: 48.9°C.

Target Organs: Blood, Kidneys, Central nervous system, Liver, Spleen, Eyes

Potential Health Effects**Eye:**

Causes eye irritation.

Skin:

May cause skin irritation. May be harmful if absorbed through the skin.

Ingestion:

May cause irritation of the digestive tract. May cause nausea and vomiting. May be harmful if swallowed.

Inhalation:

May cause respiratory tract irritation. May be harmful if inhaled.

Chronic:

May cause liver and kidney damage. May cause reproductive and fetal effects. Repeated exposure may cause damage to the spleen. Laboratory experiments have resulted in mutagenic effects. Chronic exposure may cause blood effects. Exposure to high concentrations may cause central nervous system depression. Animal studies have reported the development of tumors.

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

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin:

Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

Ingestion:

Do not induce vomiting. Get medical aid if irritation or symptoms occur.

Inhalation:

Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.

Notes to Physician:

Treat symptomatically and supportively.

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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 may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Containers may explode in the heat of a fire. Flammable liquid and vapor.

Extinguishing Media:

Use water spray, dry chemical, carbon dioxide, or chemical foam.

Autoignition Temperature:

Not available

Explosion Limits:

Lower: Not available Upper: Not available

Flash Point:

48.9°C (120.02°F)

NFPA Rating:

(estimated) Health: 2; Flammability: 2; 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. Remove all sources of ignition. Use a spark-proof tool. Do not let this chemical enter the environment.

Section 7 - Handling and Storage

Handling:

Use with adequate ventilation. Use spark-proof tools and explosion proof equipment. Do not get in eyes, on skin, or on clothing. Keep away from heat, sparks and flame. Do not ingest or inhale.

Storage:

Keep away from sources of ignition. Store in a cool, dry place. Store in a tightly closed container. Flammables-area.

Section 8 - Exposure Controls, Personal Protection

Engineering Controls:

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

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Exposure Limits

Chemical Name:	ACGIH	NIOSH	OSHA
Water	None listed	None listed	None listed
Ethanol	1000 ppm TWA	1000 ppm TWA; 1900 mg/m ³ TWA 3300 ppm IDLH (10% LEL)	1000 ppm TWA; 1900 mg/m ³ TWA;
Methanol	200 ppm TWA; 250 ppm STEL; Skin - potential significant contribution to overall exposure by the cutaneous route	200 ppm TWA; 260 mg/m ³ TWA 6000 ppm IDLH	200 ppm TWA; 260 mg/m ³ TWA;
Phenol	5 ppm TWA; Skin - potential significant contribution to overall exposure by the cutaneous route	5 ppm TWA; 19 mg/m ³ TWA 250 ppm IDLH 15.6 ppm Ceiling (15 min); 60 mg/m ³ Ceiling (15 min)	5 ppm TWA; 19 mg/m ³ TWA; prevent or reduce skin absorption;
Crystal Violet	None listed	None listed	None listed

OSHA Vacated PELs

Ethanol: 1000 ppm TWA; 1900 mg/m³ TWA

Methanol: 200 ppm TWA; 260 mg/m³ TWA

Phenol: 5 ppm TWA; 19 mg/m³ TWA

Personal Protective Equipment

Eyes:

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: Purple

Odor: Alcoholic odor.

pH: No information found

Vapor Pressure: 40 mm Hg @19°C

Vapor Density: 1.59 (Air=1)

Evaporation Rate: No information found

Viscosity: No information found

Boiling Point: 98°C

Freezing/Melting Point: -114°C

Decomposition Temperature: No information found

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Stable under normal temperatures and pressures.

Conditions to Avoid:

Incompatible materials, ignition sources, excess heat

Incompatibilities with Other Materials

Strong oxidizing agents

Hazardous Decomposition Products

Carbon monoxide, carbon dioxide

Hazardous Polymerization

Will not occur.

Section 11 - Toxicological Information**RTECS:**

CAS# 7732-18-5: ZC0110000

CAS# 64-17-5: KQ6300000

CAS# 67-56-1: PC1400000

CAS# 108-95-2: SJ3325000

CAS# 548-62-9: BO9000000

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CAS# 7732-18-5:

Oral, rat: LD50 = >90 mL/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# 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

Oral, rat: LD50 = 5600 mg/kg

Skin, rabbit: LD50 = 15800 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# 548-62-9:

Oral, mouse: LD50 = 96 mg/kg

Oral, rabbit: LD50 = 150 mg/kg

Oral, rat: LD50 = 420 mg/kg.

Carcinogenicity:

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

CAS# 64-17-5: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 67-56-1: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 108-95-2: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

CAS# 548-62-9: Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology:

Tumorigenic effects have been reported in experimental animals.

Teratogenicity:

Teratogenic effects have occurred in humans.

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Reproductive:

Adverse reproductive effects have occurred in humans.

Mutagenicity:

Mutagenic effects have occurred in humans.

Neurotoxicity:

No information found

Other:

See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity:

No information found

Environmental:

No information found

Physical:

No information found

Other:

Do not empty into drains.

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

Section 14 - Transport Information

US DOT

Canadian TDG

Proper Shipping Name: ALCOHOLS,
N.O.S.

ALCOHOLS,
N.O.S. (Ethanol,
Methanol)

Hazard Class: 3

3

UN Number: UN1987

UN1987

Packing Group: III

III

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

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

Section 15 - Regulatory Information**European/International Regulations****European Labelling in Accordance with EC Directives:**

Hazard Symbols: XI

Risk Phrases: R 10 Flammable.

R 36 Irritating to eyes.

Safety Phrases: S 7 Keep container tightly closed.

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

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

S 37/39 Wear suitable gloves and eye/face protection.

WGK (Water Danger/Protection)

Not available

United Kingdom Occupational Exposure Limits

Not available

United Kingdom Maximum Exposure Limits

Not available

Canadian DSL/NDSL

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

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

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

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

CAS# 548-62-9 is listed on Canada's DSL List.

Canadian WHMIS Classifications

This product has a WHMIS classification of B3, D2B, D2A.

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

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

CAS# 548-62-9 is listed on the Canadian Ingredient Disclosure List.

US Federal**TSCA**

CAS# 7732-18-5 is listed on the TSCA Inventory.

CAS# 64-17-5 is listed on the TSCA Inventory.

CAS# 67-56-1 is listed on the TSCA Inventory.

CAS# 108-95-2 is listed on the TSCA Inventory.

CAS# 548-62-9 is listed on the TSCA Inventory.

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CAS# 108-95-2: Effective 6/1/87, Sunset 6/1/97

Chemical Test Rules**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# 67-56-1: 5000 lb final RQ; 2270 kg final RQ

CAS# 108-95-2: 1000 lb final RQ; 454 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# 64-17-5: immediate, delayed, fire.

CAS# 67-56-1: immediate, fire.

CAS# 108-95-2: immediate, delayed, fire.

CAS# 548-62-9: immediate.

SARA Section 313

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

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

Clean Air Act - Hazardous Air Pollutants (HAPs)

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

CAS# 108-95-2 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.

Clean Water Act - Priority Pollutants

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**

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

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

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

No information found

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.

Section 16 - Other Information

Color information has been

MSDS Creation Date: July 28, 1998

Revision Date: February 20, 2008

Revisions were made in Sections:

3, 4, 5, 6, 7, 8, 9, 10, 11, 1

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.