

Material Safety Data Sheet

Crystal Violet Solution

ACC# 88094

Section 1 - Chemical Product and Company Identification

MSDS Name: Crystal Violet Solution

Catalog Numbers: 23005259

Synonyms: None known.

Company Identification:

Fisher Scientific
1 Reagent Lane
Fair Lawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name	Percent	EINECS/ELINCS
7732-18-5	Water	85+	231-791-2
64-17-5	Ethanol	<12	200-578-6
67-56-1	Methanol	<1	200-659-6
108-95-2	Phenol	<1	203-632-7
548-62-9	Crystal Violet	0.4	208-953-6

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Appearance: purple liquid. Flash Point: 48.9 deg C.

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.

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.

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.

Flash Point: 48.9 deg C (120.02 deg F)

Autoignition Temperature: Not available.

Explosion Limits, Lower:Not available.

Upper: Not available.

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.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
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	5 ppm TWA; 19 mg/m ³ TWA
Crystal Violet	none listed	none listed	none listed

OSHA Vacated PELs: Water: No OSHA Vacated PELs are listed for this chemical. Ethanol: 1000 ppm TWA; 1900 mg/m³ TWA Methanol: 200 ppm TWA; 260 mg/m³ TWA Phenol: 5 ppm TWA; 19 mg/m³ TWA Crystal Violet: No OSHA Vacated PELs are listed for this chemical.

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

Appearance: purple

Odor: Alcoholic odor.

pH: Not available.

Vapor Pressure: 40 mm Hg @19 deg C

Vapor Density: 1.59 (Air=1)

Evaporation Rate: Not available.

Viscosity: Not available.

Boiling Point: 98 deg C

Freezing/Melting Point: -114 deg C

Decomposition Temperature: Not available.

Solubility: Soluble.

Specific Gravity/Density: 1 (Water=1)

Molecular Formula: Not applicable.

Molecular Weight: Not available.

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: 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

LD50/LC50:

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/m³;
Inhalation, mouse: LC50 = 177 mg/m³/4H;
Inhalation, rat: LC50 = 316 mg/m³;
Inhalation, 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 by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 64-17-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 67-56-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 108-95-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.
CAS# 548-62-9: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: Tumorigenic effects have been reported in experimental animals.

Teratogenicity: Teratogenic effects have occurred in humans.

Reproductive Effects: Adverse reproductive effects have occurred in humans.

Mutagenicity: Mutagenic effects have occurred in humans.

Neurotoxicity: No information found

Other Studies:

Section 12 - Ecological Information

Ecotoxicity: No data available. No information available.

Environmental: No information available.

Physical: No information available.

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 Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed.

RCRA U-Series:

CAS# 67-56-1: waste number U154 (Ignitable waste).

CAS# 108-95-2: waste number U188.

Section 14 - Transport Information

	US DOT	Canada TDG
Shipping Name:	ALCOHOLS, N.O.S.	ALCOHOLS, N.O.S. (Ethanol, Methanol)
Hazard Class:	3	3
UN Number:	UN1987	UN1987
Packing Group:	III	III

Section 15 - Regulatory Information

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.

Health & Safety Reporting List

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

Chemical Test Rules

None of the chemicals in this product are under a Chemical Test Rule.

Section 12b

None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule

None of the chemicals in this material have a SNUR under TSCA.

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 TP Q

SARA Codes

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.

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. No chemicals are reportable under Section 313.

Clean Air Act:

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

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

This material does not contain any Class 1 Ozone depletors.

This material does not contain any Class 2 Ozone depletors.

Clean Water Act:

CAS# 108-95-2 is listed as a Hazardous Substance under the CWA. CAS# 108-95-2 is listed as a Priority Pollutant under the Clean Water Act. CAS# 108-95-2 is listed as a Toxic Pollutant under the Clean Water Act.

OSHA:

None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

CAS# 64-17-5 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 67-56-1 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 108-95-2 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

CAS# 548-62-9 is not present on state lists from CA, PA, MN, MA, FL, or NJ.

California Prop 65

WARNING: This product contains Ethanol, a chemical known to the state of California to cause developmental reproductive toxicity.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols:

XI

Risk Phrases:

R 10 Flammable.

R 36 Irritating to eyes.

Safety Phrases:

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.

S 7 Keep container tightly closed.

WGK (Water Danger/Protection)

CAS# 7732-18-5: No information available.

CAS# 64-17-5: 0

CAS# 67-56-1: 1

CAS# 108-95-2: 2

CAS# 548-62-9: 2

Canada - 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.

Canada - WHMIS

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.

Section 16 - Additional Information

MSDS Creation Date: 7/28/1998

Revision #18 Date: 2/20/2008

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall Fisher be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if Fisher has been advised of the possibility of such damages.