

Crystal Violet Solution  
MSDS# 88094  
Section 1 - Chemical Product and Company Identification  
MSDS Name: Crystal Violet Solution  
Catalog Numbers: 23005259  
Synonym Name: known  
Company Identification: Fisher Scientific

For information in the US, call:  
201-796-7100  
Emergency Number US: 201-796-7100  
CHEMTRAC Phone Number, US:  
800-424-9300

Section 2 - Composition, Information on Ingredients  
CAS#: 64-17-5  
Chemical Name: Ethanol  
EINECS#: 200-578-6  
Hazard Symbols: F  
Risk Phrases: 11

CAS#: 67-56-1  
Chemical Name: Methanol  
EINECS#: 200-659-6  
Hazard Symbols: F  
Risk Phrases: 11 23/24/25 39/23/24/25

CAS#: 108-95-2  
Chemical Name: Phenol  
EINECS#: 203-632-7  
Hazard Symbols: T  
Risk Phrases: 24/25 34

CAS#: 548-62-9  
Chemical Name: Crystal Violet  
EINECS#: 208-953-6  
Hazard Symbols: T  
Risk Phrases: 24/25 34

CAS#: 7732-18-5  
Chemical Name: Water  
EINECS#: 231-791-2  
Hazard Symbols: 85+  
Risk Phrases: 231-791-2

CAS#: 7732-18-5  
Chemical Name: Water  
EINECS#: 231-791-2  
Hazard Symbols: 85+  
Risk Phrases: 231-791-2

CAS#: 7732-18-5  
Chemical Name: Water  
EINECS#: 231-791-2  
Hazard Symbols: 85+  
Risk Phrases: 231-791-2

### Section 3 - Hazards Identification

#### Warning! Flammable liquid and vapor. Causes eye irritation. May cause central nervous system depression. May cause skin and respiratory tract irritation. May cause blood effects. May cause damage to 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 effects. Chronic laboratory experiments have reported blood effects. Exposure to high concentrations 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: 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.  
Extinguish: Use water spray, dry chemical, carbon dioxide, or chemical foam.  
Autoignition Temperature: Not available.  
Flash Point: 48.9 deg C (120.02 deg F)  
Explosion Limits: Lower: Not available  
Explosion Limits: Upper: Not available  
NFPA Rating: health: 2; flammability: 2; instability: 0

General Information: Section 6 - Accidental Release Measures  
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.

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  
Ethanol  
ACGIH  
1000 ppm  
NIOSH  
1000 ppm TWA;  
1900 mg/m<sup>3</sup> TWA  
3300 ppm IDLH  
(10% LEL)  
OSHA - Final PELs  
1000 ppm TWA;  
1900 mg/m<sup>3</sup> TWA

Methanol  
ACGIH  
200 ppm; 260 ppm  
NIOSH  
200 ppm TWA; 260 mg/m<sup>3</sup> TWA; 6000 ppm IDLH  
OSHA - Final PELs  
200 ppm TWA; 260 mg/m<sup>3</sup> TWA

Phenol  
ACGIH  
5 ppm; Skin - potential significant contributor to overall exposure by the cutaneous route  
NIOSH  
5 ppm TWA; 250 mg/m<sup>3</sup> TWA; 250 ppm IDLH  
OSHA - Final PELs  
5 ppm TWA; 19 mg/m<sup>3</sup> TWA

Crystal Violet  
ACGIH  
none listed  
NIOSH  
none listed  
OSHA - Final PELs  
none listed

Water  
ACGIH  
none listed  
NIOSH  
none listed  
OSHA - Final PELs  
none listed

Methanol: 260 ppm TWA; 260 mg/m3 TWA

Phenol: 5 ppm TWA; 19 mg/m3 TWA

Crystal Violet: None listed

Water: None listed  
Personal Protective Equipment

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: Pungent odor.  
Vapor Pressure: 40 mm Hg @ 19 deg C  
Evaporation Rate: 1.59 (Air=1)  
Viscosity: Not available  
Boiling Point: 98 deg C ( 208.40°F)  
Freezing/Melting Point: -114 deg C ( -173.20°F)  
Decomposition Temperature: Not available  
Solubility in Water: Soluble  
Specific Gravity/Density: (Water=1)  
Molecular Weight: Not available

Chemical Stability: Section 10 - Stability and Reactivity  
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 dioxide.  
Hazardous Polymerization: Will not occur.

Section 11 - Toxicological Information

RTCS#:  
CAS# 64-17-5: KO6300000  
CAS# 67-56-1: PC1400000  
CAS# 108-95-2: SJ3325000  
CAS# 548-62-9: BO9000000  
CAS# 732-18-5: ZC0110000  
LD50/LC50 - 18-5: ZC0110000  
RTCS# 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 = 2000 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;  
RTCS# CAS# 67-56-1: Draize test, rabbit, eye: 40 mg  
Moderate; Draize test, rabbit, eye: 24H Moderate; Draize test, rabbit, skin: 20 mg/24H Moderate; Inhalation, mouse: LC50 = 8100 mg/m3/4H; Inhalation, rat: LC50 = 6400 ppm/4H; Oral, mouse: LD50 = 7300 mg/kg; Oral, rabbit: LD50 = 14300 mg/kg; Oral, rat: LD50 = 5600 mg/kg; Skin, rabbit: LD50 = 15800 mg/kg;  
RTCS# CAS# 108-95-2: Draize test, rabbit, eye: 5 mg  
Severe; Draize test, rabbit, skin: 100 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: LD50 = 3100 mg/m3/4H; Inhalation, rat: LD50 = 3100 mg/m3/4H; Oral, mouse: LD50 = 512 mg/kg; Oral, rat: LD50 = 630 mg/kg; Oral, rat: LD50 = 669 mg/kg; Skin, rat: LD50 = 1500 mg/kg;  
RTCS# CAS# 548-62-9: Oral, mouse: LD50 = 96 mg/kg; Oral, rabbit: LD50 = 150 mg/kg; Oral, rat: LD50 = 420 mg/kg;  
RTCS# CAS# 732-18-5: Oral, rat: LD50 = >90 mg/kg;  
Carcinogenicity:

Ethanol - IARC: Group 1 carcinogen

Methanol - IARC: Group 1 carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Phenol - IARC: Group 3 (not classifiable)

Crystal Violet - IARC: Group 3 (not classifiable)

Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65. 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. Reproductive: Adverse reproductive effects have occurred in humans.

Neurotoxicity: No information found  
Mutagenicity: No information found  
Other: See actual entry in RTECS for complete information.

Other: Section 12 - Ecological Information  
Do not empty into drains.

Chemical waste generators must determine whether a discarded chemical is a hazardous waste. Section 13 - Disposal Considerations  
US EPA identifies a number of waste classification determinations 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.

US DOT Section 14 - Transport Information  
Shipping Name: ALCOHOLS, N.O.S.  
Hazard Class: 3  
UN Number: UN1987  
Packing Group: III

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

US Federal  
Shipping Name: ALCOHOLS, N.O.S. (Ethanol, Methanol)  
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OSHA  
STATE

Ethanol can be found on the following state list to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

California Prop 65

None of the chemicals in this product are listed

Risk Phrases:

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CAS# 64-17-5: 0

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2000

MSDS Creation Date: 12/20/2007

Revision #18 Date 8/20/2000

Revisions were made in Sections:

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