



Fisher Scientific

Part of Thermo Fisher Scientific

Material Safety Data Sheet

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1. PRODUCT AND COMPANY IDENTIFICATION

Product Name	Protocol Crystal Violet
Cat No.	255-960, 270-180, 291-472, 23-255-960, 23-270-180, 23-291-472, 23-005-83, 23-291-471
Synonyms	No information available.
Recommended Use	Laboratory chemicals
Company Richard Allan Scientific A Subsidiary of Thermo Fisher Scientific 4481 Campus Drive Kalamazoo, MI 49008 Tel: (800) 522-7270	Emergency Telephone Number Chemtrec US: (800) 424-9300 Chemtrec EU: (202) 483-7616

2. HAZARDS IDENTIFICATION

WARNING!

Emergency Overview

Flammable liquid and vapor. May cause eye, skin, and respiratory tract irritation . May cause central nervous system effects. This substance has caused adverse reproductive and fetal effects in humans.

Appearance Reddish-violet

Physical State Liquid

odor Alcohol-like

Target Organs

Central nervous system (CNS), Liver, Kidney, Reproductive System

Potential Health Effects

Acute Effects

Principle Routes of Exposure

Eyes

May cause irritation.

Skin

May cause irritation. May be harmful in contact with skin.

Inhalation

May cause irritation of respiratory tract. May be harmful if inhaled. Inhalation may cause central nervous system effects.

Ingestion

May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Chronic Effects

This substance has caused adverse reproductive and fetal effects in humans. Tumorigenic effects have been reported in experimental animals.. May cause adverse liver effects. May cause adverse kidney effects.

See Section 11 for additional Toxicological information.

Aggravated Medical Conditions Central nervous system disorders. Preexisting eye disorders. Liver disorders. Skin disorders.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Haz/Non-haz

Component	CAS-No	Weight %
Water	7732-18-5	< 87
Ethyl alcohol	64-17-5	10-12
Methyl alcohol	67-56-1	1
Phenol	108-95-2	0.1
C.I. Basic violet 1	548-62-9	< 1

4. FIRST AID MEASURES

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention immediately if symptoms occur.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Get medical attention immediately if symptoms occur.
Ingestion	Do not induce vomiting. Obtain medical attention.
Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flash Point	42°C / 107.6°F
Method	No information available.
Autoignition Temperature	No information available.
Explosion Limits	
Upper	No data available
Lower	No data available
Suitable Extinguishing Media	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable Extinguishing Media	No information available.
Hazardous Combustion Products	No information available.
Sensitivity to mechanical impact	No information available.
Sensitivity to static discharge	No information available.

Specific Hazards Arising from the Chemical

Flammable. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated.

Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Thermal decomposition can lead to release of irritating gases and vapors.

NFPA **Health 1** **Flammability 2** **Instability 0** **Physical hazards N/A**

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions Use personal protective equipment. Remove all sources of ignition. Take precautionary measures against static discharges. Avoid contact with skin, eyes and clothing.

Environmental Precautions Should not be released into the environment.

Methods for Containment and Clean Up Remove all sources of ignition. Soak up with inert absorbent material. Take precautionary measures against static discharges. Keep in suitable and closed containers for disposal.

7. HANDLING AND STORAGE

Handling Wear personal protective equipment. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing.

Storage Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from heat and sources of ignition. Flammables area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Measures Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

Exposure Guidelines

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH
Ethyl alcohol	TWA: 1000 ppm	(Vacated) TWA: 1900 mg/m ³ (Vacated) TWA: 1000 ppm TWA: 1900 mg/m ³ TWA: 1000 ppm	IDLH: 3300 ppm TWA: 1000 ppm TWA: 1900 mg/m ³
Methyl alcohol	TWA: 200 ppm STEL: 250 ppm Skin	(Vacated) TWA: 200 ppm (Vacated) TWA: 260 mg/m ³ (Vacated) STEL: 325 mg/m ³ (Vacated) STEL: 250 ppm Skin TWA: 200 ppm TWA: 260 mg/m ³	IDLH: 6000 ppm TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 325 mg/m ³
Phenol	TWA: 5 ppm Skin	(Vacated) TWA: 5 ppm (Vacated) TWA: 19 mg/m ³ Skin TWA: 5 ppm TWA: 19 mg/m ³	IDLH: 250 ppm TWA: 5 ppm TWA: 19 mg/m ³ Ceiling: 60 mg/m ³ Ceiling: 15.6 ppm

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEL
Ethyl alcohol	TWA: 1000 ppm TWA: 1880 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m ³	TWA: 1000 ppm TWA: 1900 mg/m ³

Component	Quebec	Mexico OEL (TWA)	Ontario TWAEV
Methyl alcohol	TWA: 200 ppm TWA: 262 mg/m ³ STEL: 328 mg/m ³ STEL: 250 ppm Skin	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 250 ppm STEL: 310 mg/m ³	TWA: 200 ppm TWA: 260 mg/m ³ STEL: 325 mg/m ³ STEL: 250 ppm Skin
Phenol	TWA: 19 mg/m ³ TWA: 5 ppm Skin	TWA: 19 mg/m ³ TWA: 5 ppm STEL: 10 ppm STEL: 38 mg/m ³	TWA: 19 mg/m ³ TWA: 5 ppm Skin

NIOSH IDLH: Immediately Dangerous to Life or Health

Personal Protective Equipment

Eyeface Protection

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 and body protection

Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory Protection

Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State

Appearance

odor

Odor Threshold

pH

Vapor Pressure

Vapor Density

Viscosity

Boiling Point/Range

Melting Point/Range

Decomposition temperature

Flash Point

Evaporation Rate

Specific Gravity

Solubility

log Pow

Molecular Formula

Liquid

Reddish-violet

Alcohol-like

No information available.

No information available.

No information available.

No information available.

No information available.

Not applicable

No information available.

No information available.

42°C / 107.6°F

No information available.

No information available.

No information available.

No data available

Solution

10. STABILITY AND REACTIVITY

Stability

Stable under normal conditions.

Conditions to Avoid

Incompatible products. Heat, flames and sparks.

Incompatible Materials

Strong oxidizing agents, Strong acids

Hazardous Decomposition Products

Carbon monoxide (CO), Carbon dioxide (CO₂)

Hazardous Polymerization

Hazardous polymerization does not occur.

Hazardous Reactions .

None under normal processing..

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

Product Information

No acute toxicity information is available for this product

Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Ethyl alcohol	7060 mg/kg (Rat)	Not listed	20000 ppm/10H (Rat)
Methyl alcohol	5628 mg/kg (Rat)	15800 mg/kg (Rabbit)	64000 ppm (Rat) 4 h 83.2 mg/L (Rat) 4 h
Phenol	317 mg/kg (Rat)	525 mg/kg (Rat) 630 mg/kg (Rabbit)	316 mg/m ³ (Rat) 4 h

Irritation

No information available.

Toxicologically Synergistic Products

No information available.

Chronic Toxicity

Carcinogenicity

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	ACGIH	IARC	NTP	OSHA	Mexico
Ethyl alcohol	Not listed	Group 1	Not listed	X	Not listed
Phenol	Not listed	group 3	Not listed	Not listed	Not listed

ACGIH: (American Conference of Governmental Industrial Hygienists)

- A1 - Known Human Carcinogen
- A2 - Suspected Human Carcinogen
- A3 - Animal Carcinogen

ACGIH: (American Conference of Governmental Industrial Hygienists)

OSHA: (Occupational Safety & Health Administration)

OSHA: (Occupational Safety & Health Administration)

X - Present

Mexico - Occupational Exposure Limits - Carcinogens

Mexico - Occupational Exposure Limits - Carcinogens

- A1 - Confirmed Human Carcinogen
- A2 - Suspected Human Carcinogen
- A3 - Confirmed Animal Carcinogen
- A4 - Not Classifiable as a Human Carcinogen
- A5 - Not Suspected as a Human Carcinogen

Sensitization

No information available.

Mutagenic Effects

No information available.

Reproductive Effects

Adverse reproductive effects have occurred in humans..

Developmental Effects

Substances known to cause developmental toxicity in humans.

Teratogenicity

Teratogenic effects have occurred in humans..

Other Adverse Effects

Tumorigenic effects have been reported in experimental animals.. See actual entry in RTECS for complete information.

Endocrine Disruptor Information No information available

12. ECOLOGICAL INFORMATION**Ecotoxicity**

Do not empty into drains.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Ethyl alcohol	Not listed	Leucidus idus: LC50 = 8.14 mg/L/48h	Photobacterium phosphoreum: EC50 = 34634 mg/L/30 min Photobacterium phosphoreum: EC50 = 35470 mg/L/5 min	EC50 = 9268 mg/L/48h EC50 = 10800 mg/L/24h
Methyl alcohol	Not listed	Pimephales promelas: LC50 > 10000 mg/L 96h	EC50 = 39000 mg/L 25 min EC50 = 40000 mg/L 15 min EC50 = 43000 mg/L 5 min	EC50 > 10000 mg/L 24h
Phenol	EC50 96 h 46.42 mg/L EC50 96 h 0.0188 - 0.1044 mg/L EC50 72 h 187 - 279 mg/L EC50 96 h 46.42 mg/L	Not listed	EC50 21 - 36 mg/L 30 min EC50 = 23.28 mg/L 5 min EC50 = 25.61 mg/L 15 min EC50 = 28.8 mg/L 5 min EC50 = 31.6 mg/L 15 min	EC50 48 h 23.0 mg/L LC50 48 h 13 mg/L EC50 48 h 23.0 mg/L

Persistence and Degradability No information available

Bioaccumulation/ Accumulation No information available

Mobility

Component	log Pow
Water	-1.87
Ethyl alcohol	-0.32
Methyl alcohol	-0.74
Phenol	1.47

13. DISPOSAL CONSIDERATIONS**Waste Disposal Methods**

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification

Component	RCRA - U Series Wastes	RCRA - P Series Wastes
Methyl alcohol - 67-56-1	U154	-
Phenol - 108-95-2	U188	-

14. TRANSPORT INFORMATION**DOT**

UN-No	UN1170
Proper Shipping Name	ETHANOL SOLUTION
Hazard Class	3
Packing Group	III

14. TRANSPORT INFORMATION**TDG**

UN-No	UN1170
Proper Shipping Name	ETHANOL SOLUTION
Hazard Class	3
Packing Group	III

IATA

UN-No	UN1170
Proper Shipping Name	ETHANOL SOLUTION
Hazard Class	3
Packing Group	III

IMDG/IMO

UN-No	UN1170
Proper Shipping Name	ETHANOL SOLUTION
Hazard Class	3
Packing Group	III

15. REGULATORY INFORMATION**International Inventories**

Component	TSCA	DSL	NDSL	EINECS	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Water	X	X	-	231-791-2	-		X	-	X	X	X
Ethyl alcohol	X	X	-	200-578-6	-		X	X	X	X	KE-13217 X
Methyl alcohol	X	X	-	200-659-6	-		X	X	X	X	KE-23193 X
Phenol	X	X	-	203-632-7	-		X	X	X	X	KE-28209 X
C.I. Basic violet 1	X	X	-	-	-		X	X	X	X	X

Legend:

X - Listed

E - Indicates a substance that is the subject of a Section 5(e) Consent order under TSCA.

F - Indicates a substance that is the subject of a Section 5(f) Rule under TSCA.

N - Indicates a polymeric substance containing no free-radical initiator in its inventory name but is considered to cover the designated polymer made with any free-radical initiator regardless of the amount used.

P - Indicates a commenced PMN substance

R - Indicates a substance that is the subject of a Section 6 risk management rule under TSCA.

S - Indicates a substance that is identified in a proposed or final Significant New Use Rule

T - Indicates a substance that is the subject of a Section 4 test rule under TSCA.

XU - Indicates a substance exempt from reporting under the Inventory Update Rule, i.e. Partial Updating of the TSCA Inventory Data Base Production and Site Reports (40 CFR 710(B)).

1 - Indicates an exempt polymer that has a number-average molecular weight of 1,000 or greater.

12 - Indicates an exempt polymer that is a polyester and is made only from reactants included in a specified list of low concern reactants that comprises one of the eligibility criteria for the exemption rule.

U.S. Federal Regulations

TSCA 12(b) Not applicable

SARA 313

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Methyl alcohol	67-56-1	1	1.0
Phenol	108-95-2	0.1	1.0

SARA 311/312 Hazardous Categorization

Acute Health Hazard	No
Chronic Health Hazard	Yes
Fire Hazard	Yes
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Clean Water Act

Component	CWA - Hazardous Substances	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants
Phenol	X	1000 lb	X	X

Clean Air Act

Component	HAPS Data	Class 1 Ozone Depletors	Class 2 Ozone Depletors
Methyl alcohol	X		-
Phenol	X		-

OSHA

Not applicable

CERCLA

This material, as supplied, contains one or more substances regulated as a hazardous substance under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302)

Component	Hazardous Substances RQs	CERCLA EHS RQs
Methyl alcohol	5000 lb	-
Phenol	1000 lb	1000 lb

California Proposition 65

Ethyl alcohol is only considered a Proposition 65 developmental hazard when it is ingested as an alcoholic beverage.

Component	CAS-No	California Prop. 65	Prop 65 NSRL
Ethyl alcohol	64-17-5	Developmental	-

State Right-to-Know

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Ethyl alcohol	X	X	X	-	X
Methyl alcohol	X	X	X	X	X
Phenol	X	X	X	X	X

U.S. Department of Transportation

Reportable Quantity (RQ): Y
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade Moderate risk, Grade 2

Canada

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

WHMIS Hazard Class

B3 Combustible liquid
D2A Very toxic materials



16. OTHER INFORMATION

Prepared By Regulatory Affairs
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Revision Summary "****", and red text indicates revision

Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of MSDS