

SAFETY DATA SHEET
Crystal Violet

Version 1 · issued 17 September 2026

1. IDENTIFICATION**Product Identifiers**

Product Name	Crystal Violet
Other Names	Article number: 12785 EC number: 208-953-6 Index number: 612-204-00-2
Product Number(s)	12785, EMS12785
CAS Number	548-62-9

Recommended use of the chemical and restriction on use

Laboratory chemicals. Laboratory staining dye, primarily used to stain cells and microorganisms for microscopy.

Company Details

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2. HAZARDS IDENTIFICATION**Classification of the substance or mixture**

Carcinogenicity 2 H351 Suspected of causing cancer.

Eye damage 1 H318 Causes serious eye damage.

Acute toxicity - oral 4 H302 Harmful if swallowed.

Label Elements**Corrosive • Harmful / irritant • Health hazard****Signal Words** Danger**Hazard Statement(s)** Harmful if swallowed.
Causes serious eye damage.
Suspected of causing cancer.**Precautionary Statement(s)** Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
If swallowed: Call a poison center/doctor if you feel unwell.
Rinse mouth.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Immediately call a poison center/doctor.
If exposed or concerned: Get medical advice/attention.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

Primary route(s) of entry

skin/eye contact and accidental ingestion

Human Health**Inhalation**

Avoid breathing dust. Inhalation is a potential exposure route, particularly when handling the powder; the commonly cited GHS classification does not assign a specific acute inhalation H-statement.

Ingestion

H302 – Harmful if swallowed.

Eyes

H318 – Causes serious eye damage.

Skin

Avoid contact; wear protective gloves. Skin is a potential route of exposure, although the standard GHS classification does not identify a specific skin hazard for crystal violet.

Environment**Other Hazards**

Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

Classification according to (d)(1)(ii) of § 1910.1200: The SDS issuer does not object to the classifications provided by importers or manufacturers of precursor products.

Hazards not otherwise classified: There are no adverse physical or health effects known that are not covered by the hazard classes of the Hazard Communications Standard.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Name	CAS No.	Content (w/w)	Classification
Crystal Violet	548-62-9		

4. FIRST AID MEASURES**Ingestion**

Immediately call a doctor.

Inhalation

Supply fresh air; consult doctor in case of complaints.

Skin Contact

Generally the product does not irritate the skin.

Eye Contact

Rinse opened eye for several minutes under running water. Then consult a doctor.

Other Information

General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Most important symptoms and effects, both acute and delayed: No further relevant information available.

Indication of any immediate medical attention and special treatment needed: No further relevant information available.

5. FIREFIGHTING MEASURES**Suitable extinguishing equipment****Fire**

Suitable extinguishing agents: Use fire fighting measures that suit the environment.

Large Fire

No further relevant information available.

HAZCHEM

No further relevant information available.

Special protective equipment and precautions for fire fighters

Special hazards arising from the substance or mixture: No further relevant information available.

Protective equipment: No special measures required.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Not required.

Environmental precautions

Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/ surface or ground water.

Methods and materials for containment and clean up

Dispose contaminated material as waste according to section 13.
 Protective Action Criteria for Chemicals
 PAC-1: 0.082 mg/m³
 PAC-2: 0.9 mg/m³
 PAC-3: 83 mg/m³
 Reference to other sections
 See Section 7 for information on safe handling.
 See Section 8 for information on personal protection equipment.
 See Section 13 for disposal information.

7. HANDLING AND STORAGE**Precautions for safe handling**

No special precautions are necessary if used correctly.
 Information about protection against explosions and fires: No special measures required.

Conditions for safe storage

Requirements to be met by storerooms and receptacles: No special requirements.
 Information about storage in one common storage facility: Not required.
 Further information about storage conditions: None.
 Specific end use(s): No further relevant information available.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**Exposure Standards****Engineering controls**

No further data; see section 7.

Personal protective equipment**Eye and face protection**

Tightly sealed goggles

Skin protection

Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

Body protection

General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes.

Respiratory protection

Breathing equipment: Not required.

9. PHYSICAL AND CHEMICAL PROPERTIES**General information****Appearance**

Solid

Odour

Odorless

pH

2.5-3.5

Vapour Pressure

Not applicable.

Density

Density at 20 °C (68 °F): 1.19 g/cm³ (9.93055 lbs/gal)

Boiling Point

Undetermined.

Melting Point

173 °C (343.4 °F)

Solubility

Water: Soluble.

Specific Gravity of Density

Relative density: Not determined.

Flash Point

Not applicable.

Flammable (Explosive) Limits

Lower: Not determined.

Upper: Not determined.

Ignition Temperature

Not determined.

10. STABILITY AND REACTIVITY

Reactivity	No further relevant information available.
Chemical stability	Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
Possibility of hazardous reactions	No dangerous reactions known.
Conditions to avoid	No further relevant information available.
Incompatible materials	No further relevant information available.

11. TOXICOLOGICAL INFORMATION

Acute effects	LD/LC50 values that are relevant for classification: Oral LD50 420 mg/kg (rat)
Eye contact	Strong irritant with the danger of severe eye injury.
Skin contact	No irritant effect.
Chronic effects	Carcinogenic categories IARC (International Agency for Research on Cancer) 2B NTP (National Toxicology Program) Substance is not listed. OSHA-Ca (Occupational Safety Health Administration) Substance is not listed.
Toxicity and irritation	Sensitization: No sensitizing effects known. Interactive effects: No interactive effects between components are known. Alternative sources for toxicological information: No non-standard sources for toxicological information where used.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Toxicity Aquatic toxicity: No further relevant information available.
Persistence and degradability	Persistence and degradability: No further relevant information available.
Bioaccumulative potential	Bioaccumulative potential: No further relevant information available.
Other adverse effects	Mobility in soil: No further relevant information available. Results of PBT and vPvB assessment PBT: Not applicable. vPvB: Not applicable. Remark: Very toxic for fish Additional ecological information: General notes: Water hazard class 3 (Assessment by list): extremely hazardous for water Do not allow product to reach ground water, water course or sewage system, even in small quantities. Danger to drinking water if even extremely small quantities leak into the ground. Also poisonous for fish and plankton in water bodies. Very toxic for aquatic organisms

13. DISPOSAL CONSIDERATIONS

General information	
Waste treatment methods	
Recommendation: Must not be disposed of together with household garbage. Do not allow product to reach sewage system.	
Uncleaned packagings:	
Recommendation: Disposal must be made according to official regulations.	
Recommended cleansing agent: Water, if necessary with cleansing agents.	

14. TRANSPORT INFORMATION

ADG label required	
Marine pollutant • Class 9 Miscellaneous	
HAZCHEM	No further relevant information available.
UN Number	DOT: void ADR, IMDG, IATA: UN3077

Proper shipping name	DOT Void ADR 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Crystal Violet) IMDG, IATA ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Crystal Violet)
Transport hazard class	ADR, IMDG, IATA Class: 9 Miscellaneous dangerous substances and articles Label: 9
Packing group	ADR, IMDG, IATA: III
Environmental hazard	Marine pollutant: Symbol (fish and tree) Special marking (ADR): Symbol (fish and tree) Special marking (IATA): Symbol (fish and tree)
Special precautions for users	Warning: Miscellaneous dangerous substances and articles
Additional information	UN-Number DOT: Void UN proper shipping name DOT: Void Transport hazard class(es) DOT Class: Void Packing group DOT: Void Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable. ADR Excepted quantities (EQ): Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g IMDG Limited quantities (LQ): 5 kg Excepted quantities (EQ): Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g Hazard identification number (Kemler code): 90 EMS Number: F-A,S-F Stowage Category: A Stowage Code: SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9. UN "Model Regulation": UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CRYSTAL VIOLET), 9, III

15. REGULATORY INFORMATION

Poisons Schedule Number	No information
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Other Information

Safety, health and environmental regulations/legislation specific for the substance or mixture
 No further relevant information available.
 Sara
 Section 355 (extremely hazardous substances): Substance is not listed.
 Section 313 (Specific toxic chemical listings): Substance is not listed.
 TSCA (Toxic Substances Control Act): ACTIVE
 Hazardous Air Pollutants: Substance is not listed.
 Proposition 65
 Chemicals known to cause cancer: Substance is listed.
 Chemicals known to cause reproductive toxicity for females: Substance is not listed.
 Chemicals known to cause reproductive toxicity for males: Substance is not listed.
 Chemicals known to cause developmental toxicity: Substance is not listed.
 Carcinogenic categories
 EPA (Environmental Protection Agency): Substance is not listed.
 TLV (Threshold Limit Value): Substance is not listed.
 NIOSH-Ca (National Institute for Occupational Safety and Health): Substance is not listed.
 GHS label elements: The substance is classified and labeled according to the Globally Harmonized System (GHS).
 Hazard pictograms: GHS05 GHS07 GHS08
 Signal word: Danger
 Hazard statements
 Harmful if swallowed.
 Causes serious eye damage.
 Suspected of causing cancer.
 Precautionary statements
 Obtain special instructions before use.
 Do not handle until all safety precautions have been read and understood.
 Wash thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 If swallowed: Call a poison center/doctor if you feel unwell.
 Rinse mouth.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Immediately call a poison center/doctor.
 IF exposed or concerned: Get medical advice/attention.
 Store locked up.
 Dispose of contents/container in accordance with local/regional/national/international regulations.
 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. OTHER INFORMATION

SDS preparation date

17 September 2026

Comments

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Date of preparation: 04/01/2025

Abbreviations and acronyms:

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

Acute toxicity - oral 4: Acute toxicity – Category 4

Eye damage 1: Serious eye damage/eye irritation – Category 1

Carcinogenicity 2: Carcinogenicity – Category 2

References

Electron Microscopy Science SDS "Crystal Violet". 01/06/2022

<https://www.emsdiasum.com/docs/technical/msds/12785.pdf>

This Safety Data Sheet (SDS) has been prepared in compliance with the Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice February 2016. It is the user's responsibility to determine the suitability of this information for adoption of necessary safety precautions. The information published in this SDS has been compiled from the publications listed in Section 16: to the best of our ability and knowledge these publications are considered accurate. We reserve the right to revise Safety Data Sheets as new information becomes available. Copies may be made for non-profit use.

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