

Safety Data Sheet

acc. to OSHA HCS

Printing date 12/07/2022

Reviewed on 12/07/2022

1 Identification

- **Product identifier**
- **Trade name:** Crystal Violet
- **Article number:** 27335
- **CAS Number:**
548-62-9
- **EC number:**
208-953-6
- **Index number:**
612-204-00-2
- **Application of the substance / the mixture:** Laboratory chemicals
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
SERVA Electrophoresis GmbH
Carl-Benz-Str. 7
D-69115 Heidelberg
Tel.: +49 6221 13840-0
FAX: +49 6221 13840-10
msds.info@serva.de
- **Information department:** Product Safety department Tel.: +49 6221 13840-35
- **Emergency telephone number:**
Medical Emergency Information in case of poisoning:
Poison Information Center Mainz - Phone: +49 (0) 6131 19240
(advisory service in German or English language)

SERVA
■ serving scientists ■

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08

Carcinogenicity 2 H351 Suspected of causing cancer.



GHS05

Eye Damage 1 H318 Causes serious eye damage.



GHS07

Acute Toxicity - Oral 4 H302 Harmful if swallowed.

- **Label elements**

- **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.

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- **Precautionary statements**

Obtain special instructions before use.

Wear protective gloves/protective clothing/eye protection/face protection.

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.

Rinse mouth.

Store locked up.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = *3

Fire = 0

Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment:**

- **PBT:** PBT - assessment not available.

- **vPvB:** vPvB - assessment not available.

* 3 Composition/information on ingredients

- **Chemical characterization: Substances**

- **CAS No. Description:**

548-62-9 Crystal Violet

- **Identification number(s):**

- **EC number:** 208-953-6

- **Index number:** 612-204-00-2

- **Description:**

- **Empirical formula:** $C_{25}H_{30}ClN_3$

- **MW:** 408.0

* 4 First-aid measures

- **Description of first aid measures**

- **General information:**

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

- **After inhalation:** Supply fresh air; consult doctor in case of complaints.

- **After skin contact:**

Immediately wash with water and soap and rinse thoroughly. Consult doctor if you feel unwell.

- **After eye contact:**

Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist immediately.

- **After swallowing:**

Wash out mouth instantly. Drink copious amounts of water and provide fresh air. Call for doctor immediately.

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

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

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂ extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**
In case of fire, the following can be released:
Nitrogen oxides (NO_x)
Hydrogen chloride (HCl)
Carbon monoxide and carbon dioxide
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Ensure adequate ventilation
Avoid formation of dust.
Avoid contact with the eyes and skin.
- **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 material for containment and cleaning up**
Dispose contaminated material as waste according to item 13.
Pick up mechanically.
- **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:** Keep ignition sources away - Do not smoke.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:**
Keep receptacle tightly sealed and store in dry conditions.
Store under lock and key and with access restricted to technical experts or their assistants only.
- **Specific end use(s):** No further relevant information available.

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8 Exposure controls/personal protection

- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** *Not required.*
- **Additional information:** *The lists that were valid during the creation were used as basis.*
- **Exposure controls**
- **Additional information about design of technical systems:** *No further data; see item 7.*
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Store protective clothing separately.
Immediately remove all soiled and contaminated clothing.
Avoid contact with the eyes and skin.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
- **Breathing equipment:**
Short term filter device:
Filter P3
- **Protection of hands:**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Protective gloves
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.
- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
Nitrile rubber, NBR
Neoprene gloves
- **Eye protection:** *Tightly sealed goggles*
- **Body protection:** *Protective work clothing*

9 Physical and chemical properties

- **Information on basic physical and chemical properties**
- **General Information:**
- **Color:** *Green*
- **Odor:** *Odorless*
- **Odor threshold:** *no information available*
- **Melting point/Melting range:** *189 °C (372.2 °F)*
- **Boiling point/Boiling range:** *no information available*
- **Flammability (solid, gaseous):** *no information available*
- **Explosion limits:**
- **Lower:** *no information available*
- **Upper:** *no information available*
- **Flash point:** *no information available*
- **Decomposition temperature:** *no information available*
- **pH-value:** *2.5*

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- **Viscosity:**
 - **Kinematic viscosity:** no information available
 - **Dynamic viscosity:** no information available
 - **Solubility in / Miscibility with:**
 - **Water at 20 °C (68 °F):** ca. 1 g/l
 - **Partition coefficient (n-octanol/water):** no information available
 - **Vapor pressure:** no information available
 - **Density at 20 °C (68 °F):** 1.19 g/cm³ (9.93055 lbs/gal)
 - **Relative density:** no information available
- **Other information** There are no more data available.
 - **Appearance:**
 - **Form:** Powder
 - **Important information on protection of health and environment, and on safety:**
 - **Danger of explosion:** Product is not explosive. However, formation of explosive dust-/air mixtures are possible.
 - **Molecular weight** 408 g/mol

* 10 Stability and reactivity

- **Reactivity:** No further relevant informations available
- **Chemical stability:**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions:** No further relevant informations available.
- **Conditions to avoid:** high temperatures
- **Incompatible materials:**
Avoid contact with:
Strong acids
Oxidizers
- **Hazardous decomposition products:** In case of fire: See Section 5

11 Toxicological information

- **Information on toxicological effects**
 - **Acute toxicity:** Harmful if swallowed.
- | | | |
|---|------|-----------------|
| · LD/LC50 values that are relevant for classification: | | |
| Oral | LD50 | 420 mg/kg (rat) |
- **on the eye:** Causes serious eye damage.
 - **Carcinogenicity:** Suspected of causing cancer.
 - **Additional toxicological information:**
 - **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.**

* 12 Ecological information

- **Toxicity:**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability:** No further relevant information available.
- **Bioaccumulative potential:** No further relevant information available.
- **Mobility in soil:** No further relevant information available.

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- **Results of PBT and vPvB assessment:**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects:**

- **Remark:** Very toxic for fish

- **Additional ecological information:**

- **General notes:**

Very toxic for aquatic organisms

Water hazard class 3 (Assessment by list): extremely hazardous for water

13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

Disposal must be made according to official regulations.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packagings:**

- **Recommendation:**

Disposal of uncleaned packagings must be made according to official regulations in the same manner as the product.

- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

- **UN-Number**

- **DOT, ADR, IMDG, IATA**

UN3077

- **UN proper shipping name**

- **DOT**

Environmentally hazardous substance, solid, n.o.s. (Crystal Violet)

- **ADR**

3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Crystal Violet)

- **IMDG**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Crystal Violet), MARINE POLLUTANT

- **IATA**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Crystal Violet)

- **Transport hazard class(es)**

- **DOT, ADR, IMDG, IATA**



- **Class**

9 Miscellaneous dangerous substances and articles

- **Label**

9

- **Packing group**

- **DOT, ADR, IMDG, IATA**

III

- **Environmental hazards**

- **Marine pollutant:**

Yes (P)

Symbol (fish and tree)

- **Special marking (ADR):**

Symbol (fish and tree)

- **Special marking (IATA):**

Symbol (fish and tree)

- **Special precautions for user**

Warning: Miscellaneous dangerous substances and articles

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· 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.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· DOT	
· Remarks:	Special marking with the symbol (fish and tree).
· 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
· UN "Model Regulation":	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CRYSTAL VIOLET), 9, III

15 Regulatory information

- **Safety, health and environmental regulations/legislation specific for the substance or mixture**
No further relevant information available.
- **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** Substance is not listed.
- **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.
- **Carcinogenicity 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.
Wear protective gloves/protective clothing/eye protection/face protection.
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.

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Immediately call a poison center/doctor.

Rinse mouth.

Store locked up.

· **Chemical safety assessment:** *A Chemical Safety Assessment has not been carried out.*

16 Other information

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.

· **Department issuing SDS:** *Product safety department*

· **Contact:** *+49 6221 13840-35*

· **Date of preparation / last revision** *12/07/2022*

· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organisation

SVHC: Substance of Very High Concern (REACH)

PBT: persistent, bioaccumulative, toxic substance (REACH)

vPvB: very persistent, very bioaccumulative substance (REACH)

REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

CLP: Regulation on classification, labelling and packaging of substances and mixtures

bw: body weight

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

P: Marine Pollutant

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