

**Crystal Violet**

Revision: 21.10.2025

Product code: AC22.00114

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking**

**1.1. Product identifier**

Crystal Violet

CAS No: 548-62-9  
Index No: 612-204-00-2  
EC No: 208-953-6

**1.2. Relevant identified uses of the substance or mixture and uses advised against**

**Use of the substance/mixture**

Reagents and laboratory chemicals  
Only for laboratory and analysis purposes.

**Uses advised against**

Do not use for private purposes (household).

**1.3. Details of the supplier of the safety data sheet**

**Details of the supplier of the safety data sheet**

Company name: AnalytiChem Services, Unipessoal, Lda  
Street: Rua de Júlio Dinis 676 7º  
Place: N-4050-320 Porto  
Telephone: +351 226002917  
E-mail: info@analytichem.com  
Contact person: SDS service department  
E-mail: SDS@analytichem.com  
Internet: www.analytichem.com  
Responsible Department: SDS service department

**Supplier or manufacturer details**

Company name: AnalytiChem Belgium NV  
Street: Industriezone "De Arend" 2  
Place: B-8210 Zedelgem  
Telephone: +32 50 28 83 20  
E-mail: info.be@analytichem.com  
Contact person: SDS service department  
E-mail: SDS@analytichem.com  
Responsible Department: AnalytiChem:  
EU-Belgium: AnalytiChem Belgium, Industriezone "De Arend" 2, 8210 Zedelgem, Belgium, +32 50 28 83 20  
EU-Germany: AnalytiChem Germany, Stempelstrasse 6, 47167 Duisburg, Germany, +49 203 51 94 – 200  
EU-Netherlands: AnalytiChem Netherlands, Communicatieweg 7, 3641 SG Mijdrecht, The Netherlands, +31 297 286848  
UK: AnalytiChem UK, Unit 7 Launton Business Center, Murdock Road, Bicester, OX26 4XB, England, +44 1869 355 500  
USA: AnalytiChem USA, 227 China Road, Winslow, Maine, 04901, United States, +1 800-244-8378  
Canada: AnalytiChem Canada, 21800 Clark Graham Avenue, Baie d'Urfe, H9X 4B6, Canada, +1 514-457-0701  
Australia: ORE Research & Exploration Pty Ltd, 37A Hosie Street, Bayswater North, 3153, Australia, +61 3 9729 0333  
+44 20 3807 3798 (CHEMTREC)

**1.4. Emergency telephone number:**

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**Further Information**

A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No 1272/2008**

Carc. 2; H351  
Acute Tox. 4; H302  
Eye Dam. 1; H318  
Aquatic Acute 1; H400  
Aquatic Chronic 1; H410

Full text of hazard statements: see SECTION 16.

**2.2. Label elements****Regulation (EC) No 1272/2008**

**Signal word:** Danger

**Pictograms:**

**Hazard statements**

H302 Harmful if swallowed.  
H318 Causes serious eye damage.  
H351 Suspected of causing cancer.  
H410 Very toxic to aquatic life with long lasting effects.

**Precautionary statements**

P273 Avoid release to the environment.  
P280 Wear protective gloves/protective clothing and eye protection/face protection.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER/doctor.  
P391 Collect spillage.

**Special labelling**

Restricted to professional users.

**2.3. Other hazards**

No data available

**SECTION 3: Composition/information on ingredients****3.1. Substances**

Sum formula: C<sub>25</sub>H<sub>30</sub>CIN<sub>3</sub>  
Molecular weight: 407,99 g/mol

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## Relevant ingredients

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification (Regulation (EC) No 1272/2008)			
548-62-9	C.I. Basic Violet 3			100 %
	208-953-6	612-204-00-2		
	Carc. 2, Acute Tox. 4, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 1; H351 H302 H318 H400 H410			

Full text of H and EUH statements: see section 16.

## Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
548-62-9	208-953-6	C.I. Basic Violet 3	100 %
	dermal: LD50 = > 2000 mg/kg; oral: LD50 = 420 mg/kg		

## Further Information

SVHC substance.

## SECTION 4: First aid measures

## 4.1. Description of first aid measures

## General information

Self-protection of the first aider

## After inhalation

Provide fresh air.

Call a physician immediately.

## After contact with skin

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

Call a physician immediately.

## After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water.

Remove contact lenses, if present and easy to do. Continue rinsing.

Consult an ophthalmologist.

## After ingestion

Rinse mouth immediately and drink plenty of water.

Call a physician immediately.

## 4.2. Most important symptoms and effects, both acute and delayed

Risk of serious damage to eyes.

Irritant, corrosive, Cough

Dyspnoea, Abdominal pain

Headache, Gastrointestinal complaints

Dizziness

## 4.3. Indication of any immediate medical attention and special treatment needed

No data available

## SECTION 5: Firefighting measures

## 5.1. Extinguishing media

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**Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

**Unsuitable extinguishing media**

no restriction

**5.2. Special hazards arising from the substance or mixture**

Combustible solids

Hazardous combustion products

In case of fire may be liberated:

Nitrogen oxides (NO<sub>x</sub>)

Hydrogen chloride (HCl)

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing.

Avoid contact with skin, eyes and clothes.

**Additional information**

Suppress gases/vapours/mists with water spray jet.

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures****General advice**

Do not breathe dust.

**For non-emergency personnel**

Provide adequate ventilation.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

Consult an expert

Do not breathe dust/fume/gas/mist/vapours/spray.

**For emergency responders**

Precautionary statements For emergency responders : Personal protection equipment: see section 8

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

**6.3. Methods and material for containment and cleaning up****For containment**

Cover drains.

Prevent spread over a wide area (e.g. by containment or oil barriers).

Collect in closed and suitable containers for disposal.

Take up carefully when dry. Take up dust-free and set down dust-free.

**For cleaning up**

Clean contaminated articles and floor according to the environmental legislation.

**Other information**

Provide adequate ventilation.

Do not breathe dust/fume/gas/mist/vapours/spray.

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

**6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

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**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

Avoid exposure - obtain special instructions before use.  
If handled uncovered, arrangements with local exhaust ventilation have to be used.  
Avoid dust formation.  
Do not breathe dust.  
Read label before use.  
Use extractor hood (laboratory).

**Advice on protection against fire and explosion**

No special fire protection measures are necessary.

**Advice on general occupational hygiene**

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink.

**Further information on handling**

Draw up and observe skin protection programme.  
Wash hands and face before breaks and after work and take a shower if necessary.  
Take off immediately all contaminated clothing and wash it before reuse.

**7.2. Conditions for safe storage, including any incompatibilities****Requirements for storage rooms and vessels**

Store in a dry place.  
Store in a place accessible by authorized persons only.

**Hints on joint storage**

Take national regulations into account.

**Further information on storage conditions**

Store in a well-ventilated place. Keep container tightly closed.  
storage temperature < +30°C

**7.3. Specific end use(s)**

Laboratory chemicals

**SECTION 8: Exposure controls/personal protection****8.1. Control parameters****DNEL/DMEL values**

CAS No	Substance			
DNEL type		Exposure route	Effect	Value
548-62-9	C.I. Basic Violet 3			
Worker DNEL, long-term		inhalation	systemic	1,48 mg/m³
Worker DNEL, long-term		dermal	systemic	0,42 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,222 mg/m³
Consumer DNEL, long-term		dermal	systemic	0,15 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,15 mg/kg bw/day

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**PNEC values**

CAS No	Substance	
	Environmental compartment	Value
548-62-9	C.I. Basic Violet 3	
	Freshwater	0,002 mg/l

**8.2. Exposure controls****Appropriate engineering controls**

Technical measures and the application of suitable work processes have priority over personal protection equipment.

Provide adequate ventilation as well as local exhaust at critical locations.

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Suitable eye protection: goggles.

**Hand protection**

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Suitable examples are gloves of KCL GmbH, D-36124 Eichenzell, e-mail: [vertrieb@kcl.de](mailto:vertrieb@kcl.de) with the following specification (test according to EN 374):

**By long-term hand contact**

Trade name/designation KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with permanent contact: > 480 min

**By short-term hand contact**

Trade name/designation KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: [www.kcl.de](http://www.kcl.de)).

**Skin protection**

Wear suitable protective clothing.

The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

**Respiratory protection**

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

Filtering device with filter or ventilator filtering device of type: P3

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

**Thermal hazards**

No data available

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**Environmental exposure controls**

Do not allow to enter into surface water or drains.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties**

Physical state:	solid
Colour:	green
Odour:	odourless
Odour threshold:	No data available
Melting point/freezing point:	189 - 194 °C
Boiling point or initial boiling point and boiling range:	No data available
Flammability:	not determined
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	not determined
Auto-ignition temperature:	not determined
Decomposition temperature:	No data available
pH-Value (at 20 °C):	2,5 - 3,5 (10 g/l)
Viscosity / kinematic:	not determined
Water solubility: (at 20 °C)	10 g/l
Solubility in other solvents not determined	
Dissolution rate:	No data available
Partition coefficient n-octanol/water:	log Pow: 1,172 (25 °C)
Dispersion stability:	No data available
Vapour pressure:	No data available
Vapour pressure:	not determined
Density (at 20 °C):	1,19 g/cm <sup>3</sup>
Relative density:	No data available
Bulk density:	~ 220 - 400 kg/m <sup>3</sup>
Relative vapour density:	not determined
Particle characteristics:	No data available

**9.2. Other information****Information with regard to physical hazard classes****Explosive properties**

Danger of dust explosion.

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

Sustained combustibility: No data available

**Self-ignition temperature**

Solid: not determined

Gas: not applicable

**Oxidizing properties**

No data available

**Other safety characteristics**

Evaporation rate: not determined

Solvent separation test: not determined

Solvent content: not determined

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Solid content:	100%
Sublimation point:	not determined
Softening point:	not determined
Pour point:	not determined
not determined:	
Viscosity / dynamic:	not determined
Flow time:	not determined

**Further Information**

not determined

**SECTION 10: Stability and reactivity****10.1. Reactivity**

Danger of dust explosion.

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

Acids

Oxidising agent

**10.4. Conditions to avoid**

Heat

**10.5. Incompatible materials**

No data available

**10.6. Hazardous decomposition products**

In case of fire may be liberated:

SECTION 5: Firefighting measures

**Further information**

No data available

**SECTION 11: Toxicological information****11.1. Information on hazard classes****Toxicokinetics, metabolism and distribution**

Avoid exposure - obtain special instructions before use.

**Acute toxicity**

Harmful if swallowed.

Irritation to respiratory tract



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CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
548-62-9	C.I. Basic Violet 3				
	oral	LD50 420 mg/kg	Rat	ChemID plus A TOXNET DATABASE.2017 (2017)	other: As mentioned below
	dermal	LD50 > 2000 mg/kg	Rabbit	ChemID plus A TOXNET DATABASE.2017 (2017)	OECD Guideline 402

**Irritation and corrosivity**

Serious eye damage/eye irritation: Causes serious eye damage.

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Risk of serious damage to eyes.

**Sensitising effects**

Based on available data, the classification criteria are not met.

**Carcinogenic/mutagenic/toxic effects for reproduction**

Suspected of causing cancer. (C.I. Basic Violet 3)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Reproductive toxicity: Based on available data, the classification criteria are not met.

**STOT-single exposure**

Based on available data, the classification criteria are not met.

**STOT-repeated exposure**

Based on available data, the classification criteria are not met.

**Aspiration hazard**

Based on available data, the classification criteria are not met.

**Information on likely routes of exposure**

No data available

**Specific effects in experiment on an animal**

No data available

**Additional information on tests**

No data available

**Practical experience**

No data available

**11.2. Information on other hazards****Endocrine disrupting properties**

No data available

**Other information**

No data available

**Further information**

Irritant, corrosive, Cough

Dyspnoea, Abdominal pain

Headache, Gastrointestinal complaints

Dizziness

**SECTION 12: Ecological information****12.1. Toxicity**

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Very toxic to aquatic life.

Very toxic to aquatic life with long lasting effects.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h]   [d]	Species	Source	Method
548-62-9	C.I. Basic Violet 3					
	Acute fish toxicity	LC50 mg/l	0,082	96 h Pimephales promelas	Study report (1977)	other: as mentioned below
	Acute algae toxicity	ErC50 mg/l	0,21	72 h Pseudokirchneriella subcapitata	REACH Registration Dossier	OECD Guideline 201
	Acute crustacea toxicity	EC50 < 0,5 mg/l	> 0,24 -	48 h Daphnia magna	Study report	OECD Guideline 202

**12.2. Persistence and degradability**

3,6 %; 28 d; aerob

OECD 301F

Not readily biodegradable (according to OECD criteria)

**12.3. Bioaccumulative potential**

log Pow: 1,172 (25 °C)

No indication of bioaccumulation potential.

**Partition coefficient n-octanol/water**

CAS No	Chemical name	Log Pow
548-62-9	C.I. Basic Violet 3	1,172

**BCF**

CAS No	Chemical name	BCF	Species	Source
548-62-9	C.I. Basic Violet 3	3	Fish	REACH Registration D

**12.4. Mobility in soil**

No data available

**12.5. Results of PBT and vPvB assessment**

This substance does not meet the PBT/vPvB criteria of UK REACH.

**12.6. Endocrine disrupting properties**

This substance does not have endocrine disrupting properties with respect to non-target organisms.

**12.7. Other adverse effects**

Discharge into the environment must be avoided.

**Further information**

Do not allow to enter into surface water or drains.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

Send to a physico-chemical treatment facility under observation of official regulations.

Do not mix with other wastes.

Do not empty into drains.

**Contaminated packaging**

Handle contaminated packages in the same way as the substance itself.

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific

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to the industry and process.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

<b><u>14.1. UN number or ID number:</u></b>	UN 3077
<b><u>14.2. UN proper shipping name:</u></b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (C.I. Basic Violet 3)
<b><u>14.3. Transport hazard class(es):</u></b>	9
<b><u>14.4. Packing group:</u></b>	III
Hazard label:	9
Classification code:	M7
Special Provisions:	274 335 375 601
Limited quantity:	5 kg
Excepted quantity:	E1
Transport category:	3
Hazard No:	90
Tunnel restriction code:	-

**Inland waterways transport (ADN)**

<b><u>14.1. UN number or ID number:</u></b>	UN 3077
<b><u>14.2. UN proper shipping name:</u></b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (C.I. Basic Violet 3)
<b><u>14.3. Transport hazard class(es):</u></b>	9
<b><u>14.4. Packing group:</u></b>	III
Hazard label:	9
Classification code:	M7
Special Provisions:	274 335 375 601
Limited quantity:	5 kg
Excepted quantity:	E1

**Marine transport (IMDG)**

<b><u>14.1. UN number or ID number:</u></b>	UN 3077
<b><u>14.2. UN proper shipping name:</u></b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (C.I. Basic Violet 3)
<b><u>14.3. Transport hazard class(es):</u></b>	9
<b><u>14.4. Packing group:</u></b>	III
Hazard label:	9
Special Provisions:	274, 335, 966, 967, 969
Limited quantity:	5 kg
Excepted quantity:	E1
EmS:	F-A, S-F

**Air transport (ICAO-TI/IATA-DGR)**

<b><u>14.1. UN number or ID number:</u></b>	UN 3077
<b><u>14.2. UN proper shipping name:</u></b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (C.I. Basic Violet 3)
<b><u>14.3. Transport hazard class(es):</u></b>	9
<b><u>14.4. Packing group:</u></b>	III
Hazard label:	9
Special Provisions:	A97 A158 A179 A197
Limited quantity Passenger:	30 kg G
Passenger LQ:	Y956
Excepted quantity:	E1
IATA-packing instructions - Passenger:	956

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IATA-max. quantity - Passenger:	400 kg
IATA-packing instructions - Cargo:	956
IATA-max. quantity - Cargo:	400 kg

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS:	Yes
Danger releasing substance:	C.I. Basic Violet 3

**14.7. Maritime transport in bulk according to IMO instruments**

not applicable

**SECTION 15: Regulatory information****15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Authorisations (REACH, annex XIV):

This substance has been listed as SVHC (substance of very high concern) in the Candidate List according to Article 59 of REACH.

Restrictions on use (REACH, annex XVII):

Entry 28, Entry 75

Information according to Directive

E1 Hazardous to the Aquatic Environment

2012/18/EU (SEVESO III):

**Additional information**

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

**National regulatory information**

Employment restrictions:

Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D):

3 - highly hazardous to water

**SECTION 16: Other information****Changes**

This data sheet contains changes from the previous version in section(s): 2,6,8,12,15.

**Abbreviations and acronyms**

Acute Tox. 4: Acute toxicity, hazard category 4

Eye Dam. 1: Serious eye damage, hazard category 1

Carc. 2: Carcinogenicity, hazard category 2

Aquatic Acute 1: Hazardous to the aquatic environment, hazard category: Acute 1

Aquatic Chronic 1: Hazardous to the aquatic environment, long-term hazard category: Chronic 1

ADR: Accord européen sur le transport des marchandises dangereuses par Route  
(European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

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**Relevant H and EUH statements (number and full text)**

H302	Harmful if swallowed.
H318	Causes serious eye damage.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

**Further Information**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights.

The receiver of our product is singularly responsible for adhering to existing laws and regulations.

Provide appropriate information, instructions and training to users