according to Regulation (EC) No. 1907/2006 (REACH) according to Regulation (EU) No. 2020/878



Trade name: 104180 - Crystal violet oxalate solution

Revision date : 04/11/2022 **Version (Revision) :** 2.0.0 (1.0.0)

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

1.1 Product identifier

Crystal violet oxalate solution (104180)

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

Relevant identified uses

For manufacturing, processing, laboratory or repacking use only.

Uses advised against

Uses other than those recommended.

1.3 Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor)

DC Fine Chemicals Ltd **Street:** 88 Hill Top

Postal code/City: NW11 6DY London United Kingdom

Telephone: +44 (0)20 7586 6800 **Telefax:** +44 (0)20 7504 1701

Information contact: info@dcfinechemicals.com

1.4 Emergency telephone number

(Only available during office hours; Monday-Friday; 08:00-18:00)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [CLP]

Flam. Liq. 3 ; H226 - Flammable liquids : Category 3 ; Flammable liquid and vapour.

Eye Irrit. 2; H319 - Serious eye damage/eye irritation: Category 2; Causes serious eye irritation.

Carc. 2; H351 - Carcinogenicity: Category 2; Suspected of causing cancer.

Aquatic Chronic 3; H412 - Hazardous to the aquatic environment : Chronic 3; Harmful to aquatic life with long lasting effects.

2.2 Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms







Flame (GHS02) · Health hazard (GHS08) · Exclamation mark (GHS07)

Signal word
WARNING

Hazard statements

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> Flammable liquid and vapour. H226 Suspected of causing cancer. H351 H319 Causes serious eye irritation.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statements

P202 Do not handle until all safety precautions have been read and understood.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No P210

smoking.

P308+P313 IF exposed or concerned: Get medical advice/attention. P337+P313 If eye irritation persists: Get medical advice/attention.

Store in a well-ventilated place. Keep cool. P403+P235

P405 Store locked up.

2.3 Other hazards

This substance/mixture contains no components considered to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Hazardous ingredients

Ethanol absolute partially denatured with Bitrex; REACH No.: 01-2119457610-43-XXXX; EC No.: 200-578-6; CAS No.: 64-

Weight fraction: ≥ 20 %

Classification 1272/2008 [CLP]: Flam. Liq. 2; H225 Eye Irrit. 2; H319

Crystal violet (C.I. 42555); REACH No.: 01-2119539680-37-XXXX; EC No.: 208-953-6; CAS No.: 548-62-9

Weight fraction: ≥ 2 %

Classification 1272/2008 [CLP]: Carc. 2; H351 Eye Dam. 1; H318 Acute Tox. 4; H302 Aquatic Acute 1; H400

Aquatic Chronic 1; H410

di-Ammonium oxalate monohydrate; REACH No.: N/D; EC No.: 214-202-3; CAS No.: 6009-70-7

Weight fraction: ≥ 0.8 %

Classification 1272/2008 [CLP]: Acute Tox. 4; H302 Acute Tox. 4; H312

Additional information

For full text of Hazard- and EU Hazard-statements: see SECTION 16.

3.3 Additional information

Included in the candidate list of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006

SECTION 4: First aid measures

4.1 Description of first aid measures

Remove contaminated, saturated clothing immediately. After contact with skin, wash immediately with plenty of water and soap. In case of skin reactions, consult a physician. After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately. If accidentally ingested, seek immediate medical attention, NEVER induce vomiting. Remove victim out of the danger area. When in doubt or if symptoms are observed, get medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person or a person with cramps. Accidental

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contact may result in serious respiratory difficulties, alteration of the central nervous system and in extreme cases, unconsciousness.

4.3 Indication of any immediate medical attention and special treatment needed

In case of doubt or when symptoms of feeling unwell persist, get medical attention. Never administer anything orally to persons who are unconscious.

SECTION 5: Firefighting measures

The product is Highly inflammable, it can cause or considerably worsen a fire, the necessary prevention measures should be taken and risks avoided. In case of fire, the following measures are recommended:

5.1 Extinguishing media

Suitable extinguishing media

Extinguisher powder or CO2. In case of more serious fires, also alcohol-resistant foam and water spray.

Unsuitable extinguishing media

Do not use a direct stream of water to extinguish. In the presence of electrical voltage, you cannot use water or foam as extinguishing media.

5.2 Special hazards arising from the substance or mixture

In case of fire may be liberated: Pyrolysis products, toxic

5.3 Advice for firefighters

Wear a self-contained breathing apparatus and chemical protective clothing. Do not inhale explosion and combustion gases. Use water to cool tanks, cisterns, or containers close to the heat source or fire. Take wind direction into account. Prevent the products used to fight the fire from going into drains, sewers, or waterways. In case of fire: Wear self-contained breathing apparatus.

Special protective equipment for firefighters

According to the size of the fire, it may be necessary to use protective suits against the heat, individual breathing equipment, gloves, protective goggles or facemasks, and boots.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Clear spills immediately.

For non-emergency personnel

Wear a self-contained breathing apparatus and chemical protective clothing. Remove persons to safety.

For emergency responders

Eliminate possible ignition points and ventilate the area. No smoking. Avoid breathing fumes. For exposure control and individual protection measures, see section 8.

6.2 Environmental precautions

Dangerous product for the environment. Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities. Retain contaminated washing water and dispose it

6.3 Methods and material for containment and cleaning up

For containment

Collect in closed and suitable containers for disposal.

For cleaning up

The contaminated area should be cleaned up immediately with: Water Soak up inert absorbent and dispose as waste

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requiring special attention. Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents). Avoid dust formation. Clear spills immediately.

6.4 Reference to other sections

Reference to other sections Disposal: see section 13 Personal protection equipment: see section 8

SECTION 7: Handling and storage

7.1 Precautions for safe handling

In case of insufficient ventilation and/or through use, explosive/highly flammable mixtures may develop.

Protective measures







Wear personal

When using do not eat, drink, smoke, sniff. protection equipment (refer to section 8).

Measures to prevent aerosol and dust generation

Vapours can form explosive mixtures with air. Take precautionary measures against static discharges. Use only in well-ventilated areas. Do not breathe gas/fumes/vapour/spray. Do not breathe dust.

Environmental precautions

Use appropriate container to avoid environmental contamination.

Specific requirements or handling rules

Handle and open container with care.

Advices on general occupational hygiene

Take care for general good hygiene and housekeeping.

7.2 Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions

Storage temperature :

Keep in a cool, well-ventilated place. Keep away from sources of ignition - No smoking.

Requirements for storage rooms and vessels

Only use containers specifically approved for the substance/product.

Hints on joint storage

Store at least 3 metres apart from: Chemicals/products that react together readily Protect against Humidity. UV-radiation/sunlight

Storage class (TRGS 510): 3

7.3 Specific end use(s)

None

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limit values

Ethanol absolute partially denatured with Bitrex ; CAS No. : 64-17-5

Limit value type (country of origin) : $\,$ VLA ($\,$ GLOB $\,$)

Limit value : 1000 ppm / 1910 mg/m³

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DNEL-/PNEC-values

DNEL/DMEL

Ethanol absolute partially denatured with Bitrex ; CAS No. : 64-17-5

Limit value type : DNEL Consumer (local)

 $\begin{array}{lll} \mbox{Exposure route:} & \mbox{Inhalation} \\ \mbox{Exposure frequency:} & \mbox{Short-term} \\ \mbox{Limit value:} & \mbox{950 mg/m}^3 \end{array}$

Limit value type : DNEL Consumer (systemic)

 $\begin{array}{lll} \mbox{Exposure route:} & \mbox{Inhalation} \\ \mbox{Exposure frequency:} & \mbox{Long-term} \\ \mbox{Limit value:} & 114 \mbox{ mg/m}^3 \end{array}$

Limit value type : DNEL Consumer (systemic)

Exposure route : Oral
Exposure frequency : Long-term
Limit value : 87 mg/kg

Limit value type : DNEL Consumer (systemic)

Exposure route: Dermal
Exposure frequency: Long-term
Limit value: 206 mg/kg
Limit value type: DNEL worker (local)
Exposure route: Inhalation

Exposure route: Inhalation
Exposure frequency: Short-term
Limit value: 1900 mg/m³

Limit value type : DNEL worker (systemic)

 $\begin{array}{lll} \mbox{Exposure route:} & \mbox{Inhalation} \\ \mbox{Exposure frequency:} & \mbox{Long-term} \\ \mbox{Limit value:} & \mbox{950 mg/m}^3 \\ \end{array}$

Limit value type : DNEL worker (systemic)

Exposure route: Dermal
Exposure frequency: Short-term
Limit value: 343 mg/kg

PNEC

Ethanol absolute partially denatured with Bitrex ; CAS No. : 64-17-5
Limit value type : PNEC (Aquatic, freshwater)
Exposure route : Water (Including sewage plant)

Exposure time : Short-term Limit value : 0.96 mg/l

Limit value type: PNEC (Aquatic, intermittent release)
Exposure route: Water (Including sewage plant)

Exposure time : Short-term
Limit value : 2.75 mg/l

Limit value type: PNEC (Aquatic, marine water)
Exposure route: Water (Including sewage plant)

Exposure time : Short-term Limit value : 0.79 mg/l

Limit value type: PNEC (Sediment, freshwater)
Exposure route: Water (Including sewage plant)

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Exposure time: Short-term
Limit value: 3.6 mg/kg
Limit value type: PNEC (Soil)
Exposure route: Soil
Exposure time: Short-term
Limit value: 0.63 mg/kg

Limit value type : PNEC (Secondary poisoning)

Exposure time : Short-term
Limit value : 0.72 mg/kg

Limit value type: PNEC (Sewage treatment plant)
Exposure route: Water (Including sewage plant)

Exposure time : Short-term Limit value : 580 mg/l

8.2 Exposure controls

Only wear fitting, comfortable and clean protective clothing.

Personal protection equipment Eye/face protection



Eye glasses with side protection Face protection shield EN 166

Skin protection

Hand protection

Tested protective gloves must be worn EN ISO 374

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.

Body protection

For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes). Wear anti-static footwear and clothing Wash contaminated clothing prior to re-use.



Respiratory protection

If technical exhaust or ventilation measures are not possible or insufficient, respiratory protection must be worn.

The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used. Particle filter device (EN 143).

Thermal hazards

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No special measures are necessary.

Environmental exposure controls

No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Appearance : Liquid Safety characteristics

Melting point/freezing point: (1013 hPa) -10 °C Initial boiling point and boiling (1013 hPa) 78.3 - 100 °C range: **Decomposition temperature:** (1013 hPa) No data available Flash point : °C 36 Auto-ignition temperature : 423 °C Lower explosion limit: Vol-% 3.3

Upper explosion limit : 19 Vol-% Vapour pressure: (50°C) 140.54 hPa Density: (20°C) 0.975 g/cm³ Solvent separation test: (20°C) not applicable Water solubility: (20°C) No data available Fat solubility: No data available. (20°C) pH: No data available log P O/W: No data available

Viscosity: (20 °C) 1.07 mPa*s

Relative vapour density : (20 °C) No data available **Evaporation rate :** No data available

Flammable solids: No data available.
Flammable gases: No data available.
Explosive properties: No data available.

9.2 Other information

None

SECTION 10: Stability and reactivity

10.1 Reactivity

The product does not present hazards by their reactivity.

10.2 Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature. Safe handling: see section 7

10.3 Possibility of hazardous reactions

The product does not present possibility of hazardous reactions.

10.4 Conditions to avoid

Avoid any improper handling.

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10.5 Incompatible materials

Keep away from oxidising agents and from highly alkaline or acidic materials in order to prevent exothermic reactions.

10.6 Hazardous decomposition products

In case of fire may be liberated: Hazardous combustion products

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008 Acute toxicity

Acute oral toxicity

Parameter: LD50 (Ethanol absolute partially denatured with Bitrex; CAS No.: 64-17-5)

Exposure route: Oral
Species: Rat
Effective dose: 6200 mg/kg

Parameter: LD50 (Crystal violet (C.I. 42555); CAS No.: 548-62-9)

Exposure route: Oral
Species: Rat
Effective dose: 420 mg/kg

Acute dermal toxicity

Parameter: LD50 (Ethanol absolute partially denatured with Bitrex ; CAS No. : 64-17-5)

Exposure route: Dermal Species: Rabbit Effective dose: 20 g/kg

Acute inhalation toxicity

Parameter: LC50 (Ethanol absolute partially denatured with Bitrex; CAS No.: 64-17-5)

Exposure route: Inhalation
Species: Rat
Effective dose: 124.7 mg/l
Exposure time: 4 h

Corrosion

Skin corrosion/irritation

No information available.

Serious eye damage/eye irritation

No information available.

Respiratory or skin sensitisation

No information available.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Carcinogenicity

No information available.

Germ cell mutagenicity

No information available.

Reproductive toxicity

No information available.

STOT-single exposure

No information available.

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STOT-repeated exposure

No information available.

Aspiration hazard

No information available.

11.2 Information on other hazards

No information available.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity

Acute (short-term) fish toxicity

Parameter: LC50 (Ethanol absolute partially denatured with Bitrex ; CAS No. : 64-17-5)

Species: Alburnus alburnus (alburnum)
Evaluation parameter: Acute (short-term) fish toxicity

Effective dose : 11000 mg/l Exposure time : 96 h

Acute (short-term) toxicity to crustacea

Parameter: EC50 (Ethanol absolute partially denatured with Bitrex; CAS No.: 64-17-5)

Species: Daphnia magna (Big water flea)
Evaluation parameter: Acute (short-term) toxicity to crustacea

Effective dose : 9268 mg/l Exposure time : 48 h

Acute (short-term) toxicity to algae and cyanobacteria

Parameter: EC50 (Crystal violet (C.I. 42555); CAS No.: 548-62-9)

Species: Acute (short-term) toxicity to crustacea
Evaluation parameter: Acute (short-term) toxicity to crustacea

Effective dose: 10 - 100 mg/l

12.2 Persistence and degradability

No information available.

12.3 Bioaccumulative potential

Parameter: Bioconcentration factor (BCF) (Ethanol absolute partially denatured with Bitrex; CAS No.

: 64-17-5)

Bioconcentration factor (BCF) Bioconcentration factor (BCF)

Value: 3

Parameter: Log KOW (Ethanol absolute partially denatured with Bitrex; CAS No.: 64-17-5)

Partition coefficient n-octanol/water (log value)
Partition coefficient n-octanol/water (log value)

Value: -0.3

Parameter: Log KOW (Crystal violet (C.I. 42555); CAS No.: 548-62-9)

Partition coefficient n-octanol/water (log value)
Partition coefficient n-octanol/water (log value)

Value : 0.51

Parameter: Log KOW (di-Ammonium oxalate monohydrate; CAS No.: 6009-70-7)

Partition coefficient n-octanol/water (log value)

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Partition coefficient n-octanol/water (log value)

Value: -2

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process. Do not dump into sewers or waterways. Waste and empty containers must be handled and eliminated according to current, local/national legislation. Follow the provisions of Directive 2008/98/EC regarding waste management.

Product/Packaging disposal

Waste treatment options

Recycle according to official regulations. Evidence for disposal must be provided.

Appropriate disposal / Product

Dispose of waste according to applicable legislation.

Appropriate disposal / Package

Non-contaminated packages must be recycled or disposed of. Contaminated packages must be completely emptied and can be re-used following proper cleaning. Packing which cannot be properly cleaned must be disposed of. Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

14.1 UN number

UN 1993

14.2 UN proper shipping name

Land transport (ADR/RID)

FLAMMABLE LIQUID, N.O.S. (Ethanol absolute partially denatured with Bitrex)

Sea transport (IMDG)

FLAMMABLE LIQUID, N.O.S. (Ethanol absolute partially denatured with Bitrex)

Air transport (ICAO-TI / IATA-DGR)

FLAMMABLE LIQUID, N.O.S. (Ethanol absolute partially denatured with Bitrex)

14.3 Transport hazard class(es)

Land transport (ADR/RID)

Class(es): 3
Classification code: F1
Hazard identification number (Kemler
No.): 30
Tunnel restriction code: D/E

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Special provisions : LQ 5 | E 1 **Hazard label(s) :** 3

Sea transport (IMDG)

 Class(es):
 3

 EmS-No.:
 F-E / $\underline{S-E}$

 Special provisions:
 LQ 5 | · E 1

 Hazard label(s):
 3

Air transport (ICAO-TI / IATA-DGR)

Class(es): 3

Special provisions: E 1

Hazard label(s): 3

14.4 Packing group

Ш

14.5 Environmental hazards

Land transport (ADR/RID): No Sea transport (IMDG): No

Air transport (ICAO-TI / IATA-DGR): No

14.6 Special precautions for user

Hazard label(s):



14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

No information available.

SECTION 15: Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture

Safety Data Sheet According to Regulation (EC) No. 1907/2006 (REACH) Classification according to Regulation (EC) No. 1272/2008 [CLP] according to Regulation (EU) No. 2020/878

Directive 2012/18/EU on the control of major-accident hazards involving dangerous substances [Seveso-III-Directive]

Hazard categories P5c - FLAMMABLE LIQUIDS

Lower-tier requirements (t) 5000 Upper-tier requirements (t) 50000

EU legislation

Authorisations and/or restrictions on use

Restrictions on use

Regulation (EC) No. 1907/2006 (REACH), Annex XVII (restrictions)

Use restriction according to REACH annex XVII, no.: 3, 40

National regulations Water hazard class

Classification according to AwSV - Class: 1 (Slightly hazardous to water)

15.2 Chemical Safety Assessment

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No information available.

SECTION 16: Other information

16.1 Indication of changes

None

16.2 Abbreviations and acronyms

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
ASTM: ASTM International, originally known as American Society for Testing and Materials (ASTM)

EINECS: European Inventory of Existing Commercial Chemical Substances

EC50: Effective Concentration 50 (Maximum Effective Concentration for 0% of Individuals)

LC50: Lethal Concentration 50 (Lethal Concentration for 50% of Individuals)

IC50: Inhibitor Concentration 50 (Inhibitory Concentration for 50% of Individuals)

NOEL: No Observed Effect Level (Maximum dose without effect)
DNEL: Derived No Effect Level (Derived no-effect dose)

DMEL: Derived Minimum Effect Level (Derived dose of minimal effect)

CLP: Classification, Labelling and Packaging

CSR: Chemical Safety Report

LD50: Lethal Dose 50 (Lethal Dose for 50% of Individuals)

IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
Codice IMDG: International Maritime Dangerous Goods code

PBT: Persistent, bioaccumulative and toxic

RID: Regulations concerning the international rail transport of Dangerous Goods

STEL: Short term exposure limit TLV: Threshold limit value TWA: Time Weighted Average UE: European Union

vPvB: Very persistent very bioaccumulative

N.D.: Uvailable N.A.: Not applicable

VwVwS.: Text of Administrative Regulation on the Classification of Substances hazardous to waters into Water

Hazard Classes

16.3 Key literature references and sources for data

None

Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

No information available.

16.5 Relevant H- and EUH-phrases (Number and full text)

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H351 Suspected of causing cancer.
H400 Very toxic to aquatic life.

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H410 Very toxic to aquatic life with long lasting effects.

16.6 Training advice

None

16.7 Additional information

None

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.

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