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

1.1 Product identifier

Trade name Crystal Violet

Stock number: B21932
CAS Number: 548-62-9
EC number: 208-953-6
Index number: 612-204-00-2

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

Identified use: SU24 Scientific research and development

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier: Alfa Aesar
Avocado Research Chemicals, Ltd.
Shore Road
Port of Heysham Industrial Park
Heysham Lancashire LA3 2XY
United Kingdom
Office Tel: +44 (0) 1524 850506
Office Fax: +44 (0) 1524 850608
Email: uktech@alfa.com
www.alfa.com

Informing department: Product safety department.

1.4 Emergency telephone number:

Call Carechem 24 at +44 (0) 1865 407333 (English only); +44 (0) 1235 239670 (Multi-language)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

GHS08 health hazard
Carc. 2 H351 Suspected of causing cancer.

GHS05 corrosion
Eye Dam. 1 H318 Causes serious eye damage.

GHS09 environment
Aquatic Acute 1 H400 Very toxic to aquatic life.
Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.

GHS07
Acute Tox. 4 H302 Harmful if swallowed.

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

Hazard pictograms

GHS05 GHS07 GHS08 GHS09

Signal word Danger

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
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P281 Use personal protective equipment as required.
P301+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/…
P405 Store locked up.
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

2.3 Other hazards

Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.1 Substances

CAS# Designation: 548-62-9 [4-[4,4'-bis(dimethylamino)benzhydrylidene)cyclohexa-2,5-
dien-1-ylidene]dimethylammonium chloride

Identification number(s):
EC number: 208-953-6
Index number: 612-204-00-2

SECTION 4: First aid measures

4.1 Description of first aid measures

After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. Seek immediate medical advice.
Safety Data Sheet
according to 1907/2006/EC, Article 31

Trade name Crystal Violet

38.0.2 After skin contact
Instantly wash with water and soap and rinse thoroughly.
Seek immediate medical advice.

39.0.2 After eye contact
Rinse opened eye for several minutes under running water. Then consult doctor.

40.0.2 After swallowing
Seek medical treatment.

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

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

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents: CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

5.2 Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)
Hydrogen chloride (HCl)

5.3 Advice for firefighters
Protective equipment:
Wear self-contained breathing apparatus.
Wear full protective suit.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

6.2 Environmental precautions:
Do not allow material to be released to the environment without proper governmental permits.

6.3 Methods and material for containment and cleaning up:
Dispose of contaminated material as waste according to section 13.

6.4 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 information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Keep containers tightly sealed.
Store in cool, dry place in tightly closed containers.
Ensure proper ventilation/exhaustion at the workplace.

Information about protection against explosions and fires: No information known.

7.2 Conditions for safe storage, including any incompatibilities
Storage Requirements to be met by storerooms and containers: No special requirements.
Information about storage in one common storage facility: Store away from oxidising agents.

Further information about storage conditions:
Keep container tightly sealed.
Store in cool, dry conditions in well sealed containers.

7.3 Specific end use(s)
No further relevant information available.

SECTION 8: Exposure controls/personal protection

Additional information about design of technical systems:
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

8.1 Control parameters Components with critical values that require monitoring at the workplace: No data

8.2 Exposure controls Personal protective equipment:
General protective and hygienic measures:
The usual precautionary measures should be adhered to in handling the chemicals.
Keep away from foodstuffs, beverages and food.
Wash hands during breaks and at the end of the work.
Keep all equipment clean and maintain in an ergonomically appropriate working environment.

Breathing equipment: Use breathing protection with high concentrations.
Recommended filter device for short term use:
Use a respirator with type P100 (USA) or P3 (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if air-purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

Protection of hands: Check protective gloves prior to each use for their proper condition.
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.

Material of gloves: Nitrile rubber, NBR
Penetration time of glove material (in minutes): 480
Glove thickness: 0.11 mm
Eye protection: Tightly sealed safety glasses.
Body protection: Protective work clothing.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
General Information
Appearance:
Form: Various forms (powder/flake/crystalline/beads, etc.)
Colour: Dark green
Odour threshold: Not determined.

pH-value: Not applicable.

Change in condition
Melting point/Melting range: ca 215 °C (dec)
Boiling point/Boiling range: Not determined
Sublimation temperature / start: Not determined
Inflammability (solid, gaseous): Not determined.
Ignition temperature: Not determined.
Decomposition temperature: Not determined.
Self-inflammability: Not determined.

Danger of explosion: Product is not explosive.

Critical values for explosion:
  Lower: Not determined
  Upper: Not determined

Steam pressure: Not applicable.

Density at 20 °C: 0.99 g/cm³

Relative density: Not determined.

Vapour density: Not applicable.

Evaporation rate: Not applicable.

Solubility in / Miscibility with:
  Water at 27 °C: 50 g/l
  Partition coefficient (n-octanol/water): Not determined.

9.2 Other information
No further relevant information available.

SECTION 10: Stability and reactivity
10.1 Reactivity
No information known.

10.2 Chemical stability
Stable under recommended storage conditions.

Thermal decomposition / conditions to be avoided:
No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions
Reacts with strong oxidising agents

10.4 Conditions to avoid
No further relevant information available.

10.5 Incompatible materials:
Oxidising agents

10.6 Hazardous decomposition products:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NOx)
Hydrogen chloride (HCl)

SECTION 11: Toxicological information
11.1 Information on toxicological effects
Acute toxicity:
Harmful if swallowed.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance.

LD/LC50 values that are relevant for classification:
  Oral [LD50] 420 mg/kg (rat)

Skin irritation or corrosion: May cause irritation
Eye irritation or corrosion: Causes serious eye damage.

Germ cell mutagenicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains mutation data for this substance.

Carcinogenicity:
No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

The Registry of Toxic Effects of Chemical Substances (RTECS) contains tumorigenic and/or carcinogenic and/or neoplastic data for this substance.

Reproductive toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains reproductive data for this substance.

Specific target organ system toxicity - single exposure: No effects known.

Subacute to chronic toxicity: The Registry of Toxic Effects of Chemical Substances (RTECS) contains acute and chronic toxicity data for this substance.

Additional toxicological information:
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

SECTION 12: Ecological information
12.1 Toxicity
Aquatic toxicity:
No further relevant information available.

12.2 Persistence and degradability:
No further relevant information available.

12.3 Bioaccumulative potential:
No further relevant information available.

12.4 Mobility in soil:
No further relevant information available.

Ecotoxicological effects:
Remark: Very toxic for fish

Additional ecological information:
General notes:
Do not allow material to be released to the environment without proper governmental permits.
Water danger class 3 (Self-assessment): extremely hazardous for water.
Do not allow product to reach ground water or sewage system, even in small quantities.
Danger to drinking water if even extremely small quantities leak into soil.
Also poisonous for fish and plankton in water bodies.
May cause long lasting harmful effects to aquatic life.
Avoid transfer into the environment.
Very toxic for aquatic organisms.

12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

12.6 Other adverse effects:
No further relevant information available.

SECTION 13: Disposal considerations
13.1 Waste treatment methods
Recommendation:
Hand over to disposers of hazardous waste.
Must be specially treated under adherence to official regulations.
Consult state, local or national regulations for proper disposal.

Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information
UN-Number: UN3077
ADR, IMDG, IATA

14.2 UN proper shipping name
ADR 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Crystal Violet)
IMDG, IATA ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Crystal Violet)
14.3 Transport hazard class(es)

ADR

Class
9 (M7) Miscellaneous dangerous substances and articles.

Label
9

IMDG

Class
9 Miscellaneous dangerous substances and articles.

Label
9

IATA

Class
9 Miscellaneous dangerous substances and articles.

Label
9

Packing group
ADR, IMDG, IATA

III

14.5 Environmental hazards:

Special marking (ADR): Symbol (fish and tree)

Special marking (IMDG): Symbol (fish and tree)

Special marking (IATA): Symbol (fish and tree)

14.6 Special precautions for user

Warning: Miscellaneous dangerous substances and articles.

Kemler Number:
90

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

Transport/Additional information:

ADR

Excepted quantities (EQ):
E

Limited quantities (LQ):
5 kg

Transport category:
3

Tunnel restriction code:
E

UN "Model Regulation":
UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Crystal Violet), 9, III

SECTION 15: Regulatory information

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

Australian Inventory of Chemical Substances Substance is listed.

Standard for the Uniform Scheduling of Drugs and Poisons Substance is not listed.

National regulations

Information about limitation of use:
Employment restrictions concerning young persons must be observed.

For use only by technically qualified individuals.

Classification according to VbF: Not applicable

Water hazard class: Water danger class 3 (Self-assessment): extremely hazardous for water.

Other regulations, limitations and prohibitive regulations

ELINCS (European List of Notified Chemical Substances) Substance is not listed.

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.

This substance is included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH).

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.

Substance is not listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use) Substance is not listed.

15.2 Chemical safety assessment:

A Chemical Safety Assessment has not been carried out.