SAFETY DATA SHEET

Preparation Date: 05/08/2015 **Revision Date:** 05/08/2015 **Revision Number:** G1

1. IDENTIFICATION

Product identifier

Product code: GE111
Product Name: GENTIAN VIOLET

Other means of identification

Synonyms: Ammonium, (4-(bis(p-(dimethylamino)phenyl)methylene)-2,5-cyclohexadien-1-ylidene)dimethyl-, chloride; Methylrosaniline chloride; Hexamethyl pararosaniline chloride; Hexamethyl-p-rosaniline chloride; Gentian Violet; Crystal Violet
CAS #: 548-62-9
RTECS # BO9000000
CI#: Not available

Recommended use of the chemical and restrictions on use

Recommended use: No information available.
Uses advised against No information available

Supplier:
Spectrum Chemical Mfg. Corp
14422 South San Pedro St.
Gardena, CA 90248
(310) 516-8000
Order Online At: https://www.spectrumchemical.com

Emergency telephone number Chemtrec 1-800-424-9300
Contact Person: Martin LaBenz (West Coast)
Contact Person: Ibad Tirmiz (East Coast)

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral	Category 4
Serious eye damage/eye irritation	Category 1
Carcinogenicity	Category 2

Label elements

Danger

Hazard statements
Harmful if swallowed
Causes serious eye damage
Suspected of causing cancer

Hazards not otherwise classified (HNOC)
Not Applicable

Other hazards
Not available

Precautionary Statements - Prevention
Obtain special instructions before use
Do not handle until all safety precautions have been read and understood
Use personal protective equipment as required
Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product

Precautionary Statements - Response
IF exposed or concerned: Get medical advice/attention
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 or doctor/physician.
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
Rinse mouth

Precautionary Statements - Storage
Store locked up

Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant

3. COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight %	Trade Secret
Crystal Violet 548-62-9	548-62-9	100	*

4. FIRST AID MEASURES

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First aid measures

General Advice: Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126)

Skin Contact: Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops. If skin irritation persists, call a physician.

Eye Contact: Flush eye with water for 15 minutes. Get medical attention.

Inhalation: Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Ingestion: Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Obtain medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms Causes serious eye irritation. May cause eye damage. May cause slight skin irritation. Purple staining of the skin, conjunctiva, cornea. May cause abdominal pain, nausea, vomiting, diarrhea.

Indication of any immediate medical attention and special treatment needed

Notes to Physician: Treat symptomatically

Protection of first-aiders

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media: Carbon dioxide (CO2). Dry chemical. Water spray mist or foam.

Unsuitable Extinguishing Media: No information available.

Specific hazards arising from the chemical

Hazardous Combustion Products: Carbon oxides, Nitrogen oxides, Halogenated compounds

Specific hazards: May be combustible at high temperatures
Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard

Special Protective Actions for Firefighters

Specific Methods: No information available.

Special Protective Equipment for Firefighters: As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions: Keep people away from and upwind of spill/leak. Ensure adequate ventilation. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Avoid dust formation. Remove all sources of ignition.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

Methods and material for containment and cleaning up

Methods for containment Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

Methods for cleaning up Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical Measures/Precautions:
Provide sufficient air exchange and/or exhaust in work rooms. All equipment used when handling the product must be grounded. Keep away from incompatible materials.

Safe Handling Advice
Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Do not breathe vapours/dust. Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Technical Measures/Storage Conditions:
Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

Incompatible Materials:
Oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

National occupational exposure limits

United States

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
Crystal Violet 548-62-9	None	None	None	None

Canada

Components	Alberta	British Columbia	Ontario	Quebec
Crystal Violet 548-62-9	None	None	None	None

Australia and Mexico

Components	Australia	Mexico
Crystal Violet 548-62-9	None	None

Appropriate engineering controls

Engineering measures to reduce exposure: Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

Individual protection measures, such as personal protective equipment

Personal Protective Equipment

Eye protection: Goggles or Safety glasses with side-shields

Skin and body protection: Chemical resistant apron. Gloves. Long sleeved clothing.

Respiratory protection: Effective dust mask. or. Wear respirator with dust filter. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds) , inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent. .

Hygiene measures: Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

9. PHYSICAL AND CHEMICAL PROPERTIES

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Physical state:
Solid.

Appearance:
Powder.

Color:
Dark green. Greenish, glistening pieces with metallic luster.

Odor:
Characteristic.

Taste
No information available

Molecular/Formula weight:
407.98

Formula:
C25H30ClN3

Flammability:
No information available

Flash point (°C):
No data available

Flashpoint (°C/°F):
No information available.

Flash Point Tested according to:
Not available

Autoignition Temperature (°C/°F):
No information available

Lower Explosion Limit (%):
No information available

Upper Explosion Limit (%):
No information available

pH:
No information available

Melting point/range(°C/°F):
No information available

Boiling point/range(°C/°F):
No information available

Bulk density:
No information available

Decomposition temperature(°C/°F):
215°C/419°F

Density (g/cm3):
No information available

Specific gravity:
No information available

Vapor pressure @ 20°C (kPa):
No information available

Evaporation rate:
No information available

Vapor density:
No information available

VOC content (g/L):
No information available

Odor threshold (ppm):
No information available

Partition coefficient (n-octanol/water):
log Kow = 0.51

Viscosity:
No information available

Miscibility:
No information available

Solubility:
Insoluble in diethyl ether
Soluble in cold water
Soluble in hot water

10. STABILITY AND REACTIVITY

Reactivity
Reactive with oxidizing agents

Chemical stability
Stability: Stable under recommended storage conditions

Possibility of Hazardous Reactions: Hazardous polymerization does not occur

Conditions to avoid: Heat. Ignition sources. Avoid dust formation. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Incompatible materials.

Incompatible Materials: Oxidizing agents.

Hazardous decomposition products: Carbon oxides. Halogenated compounds. Nitrogen oxides (NOx).

Other Information
Corrosivity: No information available

Special Remarks on Corrosivity: No information available

11. TOXICOLOGICAL INFORMATION

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Information on likely routes of exposure

Principal Routes of Exposure:
Ingestion. Inhalation.

Acute Toxicity

Component Information

Crystal Violet - 548-62-9

LD50/oral/rat = 420 mg/kg Oral LD50 Rat
LD50/oral/mouse = 96 mg/kg Oral LD50 Mouse
LD50/dermal/rat = No information available
LD50/dermal/rabbit = No information available
LC50/inhalation/rat = No information available
LC50/inhalation/mouse = No infomation available
Other LD50 or LC50information = 150 mg/kg Oral LD50 Rabbit

Product Information

LD50/oral/rat =
VALUE- Acute Tox Oral = 420mg/kg

LD50/oral/mouse =
Value - Acute Tox Oral = 96mg/kg

LD50/dermal/rabbit
VALUE-Acute Tox Dermal = No information available

LD50/dermal/rat
VALUE -Acute Tox Dermal = No information available

LC50/inhalation/rat
VALUE-Vapor = No information available
VALUE-Gas = No information available
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse
VALUE-Vapor = No information available
VALUE - Gas = No information available

VALUE - Dust/Mist = No information available

Symptoms

Skin Contact:	May cause skin irritation. It may cause mild skin irritation. It can stain the skin.
Eye Contact:	Causes moderate to severe irritation with immediate severe pain. Eye contact causes blepharospasm, purple staining of the cornea and conjunctiva. May cause permanent corneal/eye damage.
Inhalation	May cause respiratory tract irritation.
Ingestion	Harmful if swallowed. Causes gastrointestinal tract irritation with nausea, vomiting, hypermotility, diarrhea, abdominal pain. May affect behavior (ataxia). Severe systemic poisonings have not been repeated in humans,.
Aspiration hazard	No information available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity Ingestion: Prolonged or repeated ingestion may cause hypermotility and diarrhea. It may also cause dyspnea (shortness of breath and difficulty breathing), cyanosis, and muscle weakness. Crystal violet is a very weak skin sensitizer. Prolonged skin contact may cause allergic contact dermatitis.

Sensitization: No information available

Mutagenic Effects: Mutations in microorganisms
Experiments with bacteria and/or yeast have shown mutagenic effects
Experiments with human lymphocytes have shown mutagenic effects
Cytogenic Analysis: human lymphocyte
Experiments with animal lymphocytes have shown mutagenic effects

Carcinogenic effects: Limited evidence of a carcinogenic effect. May cause cancer based on animal test data. Tumorigenic agent by RTECS criteria.

Components	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
Crystal Violet	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

Reproductive toxicity No data is available

Reproductive Effects: No information available
Developmental Effects: May cause adverse developmental effects based on animal data
There is limited human experience on developmental effects of Crystal violet
Teratogenic Effects: No information available

Specific Target Organ Toxicity

STOT - single exposure No information available
STOT - repeated exposure No information available
Target Organs: No information available

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity effects: Aquatic environment.

Crystal Violet - 548-62-9
Freshwater Algae Data: EC50 - Pseudokirchneriella subcapitata - 0.42 mg/l - 72 hr.
Water Flea Data: EC50 - Daphnia magna(water flea) - 0.35 mg/l - 48 hr. (OECD Test Guideline 202)

Persistence and degradability: Not readily biodegradable

Bioaccumulative potential: Potential for bioconcentration in aquatic organisms is low.

Mobility: No information available

13. DISPOSAL CONSIDERATIONS

Disposal Methods

Waste from residues / unused products:
Waste must be disposed of in accordance with Federal, State and Local regulation.

Contaminated packaging:
Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Crystal Violet	None	None	None	None

14. TRANSPORT INFORMATION

DOT

UN-No:	Not Regulated for Transportation unless all or part of the transportation is by vessel (applies to bulk and non-bulk shipments). For bulk shipments by ground only, it may be transported as a marine pollutant (regulated as UN3077,Class 9 "Environmentally Hazardous Substances, solid") because it meets the requirment of Chapter 2.9 of the IMDG code, but it is not mandatory by DOT because it is not on the DOT Marine Pollutant list in 49CFR Appendix B to 172.101
Proper Shipping Name:	Environmentally hazardous substance, solid, n.o.s.
Hazard Class:	No information available
Subsidiary Risk:	No information available
Packing Group:	None
ERG No:	No information available
Marine Pollutant	No data available
DOT RQ (lbs):	No information available

TDG (Canada)

UN-No:	UN3077
Proper Shipping Name:	Environmentally hazardous substance, solid, n.o.s.
Hazard Class:	9
Subsidiary Risk:	No information available
Packing Group:	III
Description:	No information available

ADR

UN-No:	UN3077
Proper Shipping Name:	Environmentally hazardous substance, solid, n.o.s.
Hazard Class:	9
Packing Group:	III
Subsidiary Risk:	No information available
Classification Code:	No information available
Description:	No information available
CEFIC Tremcard No:	No information available

IMO / IMDG

UN-No:	UN3077
Proper Shipping Name:	Environmentally hazardous substance, solid, n.o.s.
Hazard Class:	9
Subsidiary Risk:	No information available
Packing Group:	III
Description:	No information available

14. TRANSPORT INFORMATION

IMDG Page: No information available
Marine Pollutant No information available
EMS: F-A
MFAG: No information available
Maximum Quantity: No information available

RID

UN-No: UN3077
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s.
Hazard Class: 9
Subsidiary Risk: No information available
Packing Group: III
Classification Code: No information available
Description: No information available

ICAO

UN-No: UN3077
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s.
Hazard Class: 9
Subsidiary Risk: No information available
Packing Group: III
Description: No information available

IATA

UN-No: UN3077
Proper Shipping Name: Environmentally hazardous substance, solid, n.o.s.
Hazard Class: 9
Subsidiary Risk: No information available
Packing Group: III
ERG Code: 9L
Description: No information available

15. REGULATORY INFORMATION

International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
Crystal Violet	Present	Present KE-07006	Present	Present (4)-873 (5)-1969 (5)-1971	Present	Present	Present 208-953-6

U.S. Regulations

California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

Chemicals Known to the State of California to Cause Cancer:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Chemicals Known to the State of California to Cause Reproductive Toxicity:
This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Crystal Violet	Not Listed	Not Listed	Not Listed	Not Listed

CERCLA/SARA

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting *de minimis*
Crystal Violet	None	None	None	None	None

U.S. TSCA

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Crystal Violet	Not Applicable	Not Applicable

Canada

WHMIS hazard class:
D1B Toxic materials
D2B Toxic materials

Crystal Violet
D1B D2B

Canada Controlled Products Regulation:
This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Crystal Violet	0.1 %

Inventory

Components	Canada (DSL)	Canada (NDSL)
Crystal Violet	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Manditory Reporting
Crystal Violet	Not listed	Not listed

EU Classification

R-phrase(s)
R22 - Harmful if swallowed.
R40 - Limited evidence of a carcinogenic effect
R41 - Risk of serious damage to eyes.
R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

S -phrase(s)
S 2 - Keep out of the reach of children.
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S46 - If swallowed, seek medical advice immediately and show this container or label.
S60 - This material and its container must be disposed of as hazardous waste.
S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.
S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection.

Components	Classification	Concentration Limits:	Safety Phrases

Crystal Violet	Xn; R22 Carc.Cat.3; R40 Xi; R41 N; R50-53	No information	S2 S26 S36/37/39 S46 S60 S61

The product is classified in accordance with Annex VI to Directive 67/548/EEC

Indication of danger:
Xn - Harmful.
Xi - Irritant.
N - Dangerous for the environment.

16. OTHER INFORMATION

Preparation Date: 05/08/2015
Revision Date: 05/08/2015
Prepared by: Sonia Owen

Disclaimer:

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

End of Safety Data Sheet