MATERIAL SAFETY DATA SHEET
CRYSTAL VIOLET

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name	:	Crystal Violet
CAS	:	548-62-9
Synonym	:	Aizen Crystal Violet, Aniline Violet, Basic Violet 3, Bismuth Violet, Gentian Violet; Ammonium, (4-(bis(p-(dimethylamino)phenyl)methylene)-2,5- cyclohexadien-1-ylidene)dimethyl-,chloride; Methylrosaniline chloride; Hexamethyl pararosaniline chloride; Hexamethyl-p-rosaniline chloride
Chemical Name	:	Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2, 5-cyclohexadien-1-ylidene]-n-methyl, chloride
Chemical formula	:	C-25-H30-Cl-N3
Molecular weight	:	407.99

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SECTION 2: COMPOSITION AND INFORMATION ON INGREDIENTS

Composition:

Chemical Name	CAS #	% weight
Crystal Violet	548-62-9	100

Toxicological Data on Ingredients: Crystal Violet: ORAL (LD50): Acute: 420 mg/kg [Rat]. 96 mg/kg [Mouse]. 150 mg/kg [Rabbit].

SECTION 3: HAZARDS IDENTIFICATION

Potential Acute Health Effects:
Hazardous in case of eye contact (irritant), of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant).
Potential Chronic Health Effects:
CARCINOGENIC EFFECTS: Not available. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. TERATOGENIC EFFECTS: Not available. DEVELOPMENTAL TOXICITY: Not available. Repeated or prolonged exposure is not known to aggravate medical condition.

SECTION 4: FIRST AID MEASURES

Eye Contact:
Check for and remove any contact lenses. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Cold water may be used. Get medical attention immediately.
Skin Contact:
Wash with soap and water. Cover the irritated skin with an emollient. Get medical attention if irritation develops. Cold water may be used.
Serious Skin Contact: Not available.
Inhalation:
If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Serious Inhalation: Not available.
Ingestion:
Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If large quantities of this material are swallowed, call a physician immediately. Loosen tight clothing such as a collar, tie, belt or waistband.

Serious Ingestion: Not available.

SECTION 5: FIRE AND EXPLOSION DATA

Flammability of the Product: May be combustible at high temperature.
Auto-Ignition Temperature: Not available.
Flash Points: Not available.
Flammable Limits: Not available.
Products of Combustion: These products are carbon oxides (CO, CO2), nitrogen oxides (NO, NO2...), halogenated compounds.
Fire Hazards in Presence of Various Substances:
Slightly flammable to flammable in presence of heat. Non-flammable in presence of shocks.
Explosion Hazards in Presence of Various Substances:
Slightly explosive in presence of open flames and sparks. Non-explosive in presence of shocks.
Fire Fighting Media and Instructions:
SMALL FIRE: Use DRY chemical powder. LARGE FIRE: Use water spray, fog or foam. Do not use water jet.
Special Remarks on Fire Hazards: As with most organic solids, fire is possible at elevated temperatures
Special Remarks on Explosion Hazards:
Fine dust dispersed in air in sufficient concentrations, and in the presences of an ignition source is a potential dust explosion hazard.

SECTION 6: ACCIDENTAL RELEASES MEASURE

Small Spill:
Use appropriate tools to put the spilled solid in a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and dispose of according to local and regional authority requirements.
Large Spill:
Use a shovel to put the material into a convenient waste disposal container. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.

SECTION 7: HANDLING AND STORAGE

Precautions:
Keep away from heat. Keep away from sources of ignition. Do not ingest. Do not breathe dust. Avoid contact with eyes. Wear suitable protective clothing. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Keep away from incompatibles such as oxidizing agents.
Storage: Keep container tightly closed. Keep container in a cool, well-ventilated area.

SECTION 8: PERSONAL PROTECTION

Engineering Controls:
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.

Personal Protection:
Splash goggles. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Gloves.
Personal Protection in Case of a Large Spill:
Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits: Not available.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Physical state and appearance: Solid. (Powdered solid. Glistening pieces)
Odor: Characteristic. (Slight.)
Taste: Not available.
Molecular Weight: 407.99 g/mole
Color: Green. (Dark.)
pH (1% soln/water): Not available.
Boiling Point: Not available.
Melting Point: Decomposition temperature: 215°C (419°F)
Critical Temperature: Not available.
Specific Gravity: Not available.
Vapor Pressure: Not applicable.
Vapor Density: Not available.
Volatility: Not available.
Odor Threshold: Not available.
Water/Oil Dist. Coeff.: Not available.
Ionicity (in Water): Not available.
Dispersion Properties: See solubility in water.
Solubility:
Soluble in cold water, hot water. Insoluble in diethyl ether.

SECTION 10: STABILITY AND REACTIVITY DATA

Stability: The product is stable.
Instability Temperature: Not available.
Conditions of Instability: Excess heat, dust generation, incompatible materials
Incompatibility with various substances: Reactive with oxidizing agents.
Corrosivity: Not available.
Special Remarks on Reactivity: Not available.
Special Remarks on Corrosivity: Not available.
Polymerization: Will not occur.

SECTION 11: TOXICOLOGICAL INFORMATION

Routes of Entry: Inhalation. Ingestion.
Toxicity to Animals: Acute oral toxicity (LD50): 96 mg/kg [Mouse].
Chronic Effects on Humans: MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast.
Other Toxic Effects on Humans:
Hazardous in case of ingestion, of inhalation. Slightly hazardous in case of skin contact (irritant).
Special Remarks on Toxicity to Animals: Not available.
Special Remarks on Chronic Effects on Humans:
May affect genetic material (mutagenic). May cause adverse reproductive effects and birth defects (teratogenic) based on animal test data. May cause cancer based on animal test data.
Special Remarks on other Toxic Effects on Humans:
Acute Potential Health Effects: Skin: May cause mild skin irritation. It can stain the area of contacted skin. Eyes: Causes moderate to severe irritation with immediate severe pain. Eye contact causes blepharospasm, purple staining of the cornea and conjunctivacause permanent corneal/eye damage. Inhalation: May be harmful if inhaled. May cause upper respiratory tract and mucous membrane irritration. Ingestion: Harmful if swallowed! Causes gastrointestinal tract irritation with nausea, vomiting, hypermotility, diarrhea, abdominal pain. May affect respiration (acute pulmonary edema), behavior (ataxia)Severe systemic poisonings have not been repeated in humans, but animal studies have shown blood pressure rise and death from respiratory paralysis during IV administration. Chronic Potential Health Effects: Ingestion: Prologned or repeated ingestion may cause

peritonitis and may affect metabolism (weight loss).

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: Not available.
BOD5 and COD: Not available.
Products of Biodegradation:
Possibly hazardous short term degradation products are not likely. However, long term degradation products may arise.
Toxicity of the Products of Biodegradation: The products of degradation are as toxic as the product itself.
Special Remarks on the Products of Biodegradation: Not available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal: Waste must be disposed of in accordance with federal, state and local environmental control regulations.

SECTION 14: TRANSPORT INFORMATION

DOT Classification: Not a DOT controlled material (United States).
Identification: Not applicable.
Special Provisions for Transport: Not applicable.

SECTION 15: OTHER REGULATORY INFORMATION

Other Classifications:
WHMIS (Canada):
CLASS D-1B: Material causing immediate and serious toxic effects (TOXIC). CLASS D-2B: Material causing other toxic effects (TOXIC).
DSCL (EEC):
R20- Harmful by inhalation.
R40- Possible risks of irreversible effects.
R41- Risk of serious damage to eyes.
S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.
S45- In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
HMIS (U.S.A.):
Health Hazard: 2
Fire Hazard: 1
Reactivity: 0
Personal Protection: E
National Fire Protection Association (U.S.A.):
Health: 2
Flammability: 1
Reactivity: 0
Specific hazard:
Protective Equipment:
Gloves. Lab coat. Dust respirator. Be sure to use an approved/certified respirator or equivalent. Wear appropriate respirator when ventilation is inadequate. Splash goggles.

SECTION 16: OTHER INFORMATION

Product Use:

Laboratory Reagent.

Disclaimer:

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