

## SPI Supplies Division

Structure Probe, Inc.

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Manufacturer's CAGE: 1P573

## Safety Data Sheet

Date Effective: September 26, 2018

SPI Catalog #'s 02577-AB, 02577-MB

SPI-Chem™ Crystal Violet (Gentian Violet)

### Section 1.1: Identification

Chemical Name/Synonyms ..... Crystal Violet; Gentian Violet

Product or Trade Name ..... SPI-Chem™ Crystal Violet (Gentian Violet)

CAS #'s ..... 548-62-9

Chemical Formula..... C<sub>25</sub>H<sub>30</sub>ClN<sub>3</sub>

### Section 1.2: Relevant Uses/Restrictions

Chemical stain for use in microscopy laboratory.  
Not for food, drug, pesticide, or biocidal product use.

### Section 1.3: Supplier of the Safety Data Sheet

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### Section 1.4: Emergency telephone number

Emergencies  
Contacting CHEMTREC:

24 Hour Emergency Use Only #'s...

Worldwide phone: 1-(703)-741-5970

Toll-free phone: 1-(800)-424-9300 USA + Canada only

### Section 2: Hazard Identification

#### 2.1 Classification of the substance

**Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS):**

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

Acute oral toxicity: Category 4

Serious Eye Damage/ Eye Irritation, Category 1.  
Carcinogenicity, Category 2  
Chronic aquatic toxicity, Category 1

## 2.2 Label elements

### Pictogram



**Signal Word:** Danger

### Hazard statements:

- H 302 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:

- P201 Obtain special instructions before use
- P202 Do not handle until all safety precautions have been read and understood
- P281 Use personal protective equipment as required
- P264 Wash face, hands and any exposed skin thoroughly after handling
- P270 Do not eat, drink, or smoke when using this product
- P308 + P313 If exposed or concerned: Get medical attention/advice
- P305 + P351 + P310 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.
- P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
- P391 Collect spillage
- P405 Store locked up
- P501 Dispose of contents/container to an approved waste disposal plant

### Hazardous Material Information System USA (estimated)

Health ..... 2  
Fire Hazard ..... 1  
Reactivity ..... 1  
Personal protection

**2.3 Hazards not otherwise classified (HNOC) or not covered by GHS: none**

Health ..... 2  
Fire Hazard ..... 1  
Reactivity ..... 1  
Personal Protection .....

**NFPA Rating**

Health ..... 2  
Flammability..... 1  
Reactivity ..... 1

**Section 3: Composition**

**3.1 Substances:**

Crystal violet (Gentian violet) CAS # 548-62-9 EC # 208-953-6 95-100 %  
Molecular weight: 407.99..... C<sub>25</sub>H<sub>30</sub>ClN<sub>3</sub>

**Section 4: First Aid Measures**

**4.1 Description of first aid measures:**

**Inhalation:** If breathed in, move person to fresh air. If not breathing, give artificial respiration. Consult a physician.

**Skin Contact:** Wash off with soap and plenty of water. Consult a physician.

**Eye Contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**Ingestion:** If swallowed, never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**Self-protection of the first aider:** If victim ingested or inhaled the substance, give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.

**4.2 Most important symptoms and effects, both acute and delayed:** Causes eye burns. Causes severe eye damage.

**4.3 Indication of any immediate medical attention and special treatment needed:** Treat symptomatically.

**Section 5: Fire Fighting Measures**

**5.1 Extinguishing media:** Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

**5.2 Special hazards arising from the substance or mixture:** Thermal decomposition can lead to release of irritating gases and vapors. Do not allow run-off from the fire-fighting to enter drains or water courses.

**5.3 Hazardous combustion products:** Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Hydrogen chloride gas, Nitrogen oxides (NO<sub>x</sub>).

**5.4 Advice for firefighters:**

**Special protective equipment and precautions for firefighters:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

## ***Section 6: Accidental Release Measures***

### **6.1 Personal precautions:**

- Use personal protective equipment.
- Ensure adequate ventilation.
- Avoid dust formation.
- Avoid contact with skin, eyes, and clothing.

### **6.2 Environmental precautions:**

- Do not flush into surface water or sanitary sewer system.
- Do not allow material to contaminate ground water system.
- Prevent product from entering drains.
- Local authorities should be advised if significant spillages cannot be contained.

### **6.3 Methods and material for containment and cleaning up:**

- Sweep up or vacuum up spillage and collect in suitable container for disposal.
- Avoid dust formation.

### **6.4 Reference to other sections:**

- See Section 13 for disposal information.

## ***Section 7: Handling and Storage***

### **7.1 Precautions for safe handling:**

- Wear personal protective equipment.
- Ensure adequate ventilation.
- Avoid dust formation.
- Do not get in eyes, on skin, or on clothing.
- Do not breathe dust.
- Do not ingest.

### **7.2 Conditions for safe storage, including any incompatibilities:**

- Keep containers tightly closed in a dry, cool, and well-ventilated place.
- Keep away from direct sunlight.

### **7.3 Specific end uses:**

- Chemical stain for use in microscopy laboratory.
- Not for food, drug, pesticide, or biocidal product use.

This material is not being offered for clinical or diagnostic applications, agricultural uses or for human or animal consumption.

## ***Section 8: Exposure Controls and Personal Protection***

### **8.1 Control parameter and Personal Protection:**

#### **Workplace exposure limits:**

This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

**Biological limit values:** No data available.

## 8.2 Exposure controls:

### 8.2.1 Appropriate engineering controls:

Ensure adequate ventilation, especially in confined areas.  
Ensure that eyewash stations and safety showers are close to the workstation location.  
Handle in accordance with good industrial hygiene and safety practice.  
Wash hands before breaks and at the end of the workday.

### 8.2.2 Individual protection measures:

Eye/face protection: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN 166.

Skin and body protection: Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory protection: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

### 8.2.3 Environmental exposure controls:

Prevent further leakage or spillage if safe to do so.  
Do not let product enter drains.  
Discharge into the environment must be avoided.

## **Section 9: Physical and Chemical Properties**

### 9.1 Information on basic physical and chemical properties:

**Appearance:** Dark green crystals

**Odor:** Odorless

**Odor threshold:** No information available

**pH:** 2.5 – 3.5, 10 g/L aqueous solution (20 °C)

**Melting point/Freezing point:** 215 °C (419 °F)

**Boiling point/Boiling point range:** No information available

**Flash Point:** No information available

**Evaporation rate:** Not applicable

**Flammability (solid, gas):** No information available

**Upper/lower flammability or explosive limits:** No data available

**Vapor Pressure:** No information available

**Vapor density:** Not applicable

**Relative density:** No information available

**Solubility:** Insoluble in water

**Partition coefficient (n-octanol/water):** No data available

**Auto-ignition temperature:** No data available

**Decomposition temperature:** No information available

**Viscosity:** Not applicable

**Explosive properties:** No information available

**Oxidizing Properties:** No information available

**Molecular Formula:** C<sub>25</sub>H<sub>30</sub>ClN<sub>3</sub>

**Molecular Weight:** 407.99

**9.2 Other information:** No further relevant information available.

## **Section 10: Stability and Reactivity**

**10.1 Reactivity:** No known reactive hazards, based on available information.

**10.2 Chemical Stability:** Stable under normal conditions. Light sensitive.

**10.3 Possibility of Hazardous Reactions:** None under normal processing.

**Hazardous Polymerization:** Hazardous polymerization does not occur.

**10.4 Conditions to avoid:** Avoid dust formation, Incompatible products, Excess heat, Exposure to light.

**10.5 Incompatible materials:** Strong oxidizing agents, Strong acids, Strong reducing agents.

**10.6 Hazardous decomposition products:** Carbon monoxide (CO), Carbon dioxide (CO<sub>2</sub>), Hydrogen chloride gas, Nitrogen oxides (NO<sub>x</sub>).

## **Section 11: Toxicological Information**

**Information on the likely routes of exposure:**

**11.1 Information on toxicological effects:**

**A. Acute toxicity:**

CAS # 548-62-9

LD50 Oral, Rat 420 mg/kg

LD 50 Dermal Not listed

LC 50 Inhalation Not listed

**B. Skin corrosion/irritation:**

No data available.

**C. Serious eye damage/irritation:**

Severe eye irritant.

**D. Respiratory or skin sensitization:**

No data available.

**E. Germ cell mutagenicity**

No data available.

**F. Carcinogenicity**

CAS # 548-62-9:

IARC: Not listed

NTP: Not listed

ACGIH: Not listed

OSHA: Not listed

Mexico: Not listed

**G. Reproductive toxicity:**

No data available.

Developmental Effects: No information available.

Teratogenicity: No information available.

**H. STOT-single exposure:**

No data available.

**I. STOT-repeated exposure:**

No data available.

**J. Aspiration hazard:**

No data available.

**Symptoms / effects, both acute and delayed:** No information available.

**Endocrine Disruptor Information:** No information available.

**Other Adverse Effects:** tumorigenic effects have been reported in experimental animals.

## **Section 12: Ecological Information**

**12.1 Toxicity:**

Ecotoxicity: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains the following substances which are hazardous for the environment:

Crystal violet CAS # 548-62-9

Freshwater algae	EC50	0.025-0.8 mg/l, 72 h (Pseudokirchneriella subcapitata)	OECD 201
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Water flea	EC50	0.24 – 5 mg/l, 48 h (Daphnia magna)	OECD 202
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Freshwater fish	not listed		
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Microtox	not listed		
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**12.2 Persistence and degradability:** Persistence is unlikely.

**12.3 Bio-accumulative potential:** No information available.

**12.4 Mobility in soil:** No information available.

**12.5 Results of PBT and vPvB assessment:** PBT/vpvB assessment not available as chemical safety assessment not required/not conducted.

**12.6 Other adverse effects:**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life with long lasting effects.

## **Section 13: Disposal Considerations**

**13.1 Waste treatment methods:**

Product: Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging: Dispose of as unused product.

## **Section 14: Transport Information**

### **DOT:**

UN Number:	UN3077
Class:	9
Packing group:	III
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

### **IATA:**

UN Number:	UN3077
Class:	9
Packing group:	III
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

### **IMDG:**

UN Number:	UN3077
Class:	9
Packing group:	III
Proper shipping name:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
Marine pollutant:	yes

### **Further information:**

EHS-Mark required (ADR 2.2.9.1.10, IMDG Code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods >5L for liquids or 5 kg for solids.

## **Section 15: Regulatory Information**

### **15.1 Safety, health and environmental regulations/ legislation specific for the substance or mixture:** **Crystal violet                      CAS # 548-62-9**

#### **U.S. Government Regulations:**

TSCA 12(b): Not listed

SARA 311/312: Not listed

SARA 313: Not listed

Clean Air Act: Not listed

Clean Water Act: Not listed

OSHA: Not applicable

California Prop. 65: Not listed

**15.2 Chemical Safety Assessment:** Has not been carried out.

**Date of Preparation:** 26 September 2018



## **Abbreviations and acronyms**

IMDG: International Maritime Code for Dangerous Goods  
DOT: US Department of Transportation  
CMRG: Chemical Manufacturer's Recommended Guidelines  
IATA: International Air Transport Association  
ACGIH: American Conference of Governmental Industrial Hygienists  
AIHA: American Industrial Hygiene Association  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bio-accumulative and Toxicological  
vPvB: very Persistent and very Bio-accumulative  
NIOSH: National Institute for Occupational Safety  
OSHA: Occupational Safety Health  
ATE: Acute Toxicity Estimates  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
STEL: Short Term Exposure Limit  
CEIL: Ceiling  
TSCA: Toxic Substances Control Act (USA)  
DSL: Domestic Substances List (Canada)  
PICCS: Philippine Inventory of Chemicals and Chemical Substances  
ENCS: Existing and New Chemical Substances (Japan)  
AICS: Australian Inventory of Chemical Substances  
IECSC: Inventory of Existing Chemical Substances in China  
KECL: Korea Existing Chemicals List

## **Section 16: Other Information**

### **Disclaimer of Liability:**

Caution! Do not use SPI Supplies products or materials in applications involving implantation within the body; direct or indirect contact with the blood pathway; contact with bone, tissue, tissue fluid, or blood; or prolonged contact with mucous membranes. Products offered by SPI Supplies are not designed or manufactured for use in implantation in the human body or in contact with internal body fluids or tissues. SPI Supplies will not provide to customers making devices for such applications any notice, certification, or information necessary for such medical device use required by US FDA (Food and Drug Administration) regulation or any other statute. SPI Supplies and Structure Probe, Inc. make no representation, promise, express warranty or implied warranty concerning the suitability of these materials for use in implantation in the human body or in contact with internal body tissues of fluids.

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