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## MATERIAL SAFETY DATA SHEET

### EMERGENCY ASSISTANCE - 24 hour

For emergency assistance involving chemicals call CHEMTREC (800) 424-9300.

### SECTION 1: MATERIAL INFORMATION

**Common Name:** BASIC FUCHSIN STAIN SOLUTION  
**Synonyms:** p-Rosaniline chloride; Basic Violet 14; C.I. 42510  
**Catalog Number:** R5812, R5819, R5824, R5829, R5834  
**CAS #:** N/AV  
**WARNING:** POISON, CARCINOGEN, FLAMMABLE

### SECTION 2: HAZARDOUS INGREDIENTS

<u>Hazardous Components</u>	<u>CAS #</u>	<u>Chemical Family</u>	<u>Molecular Formula</u>	<u>Approximate Concentration</u>
Basic Fuchsin	632-99-5	Basic Dye(s)	C <sub>20</sub> H <sub>9</sub> N <sub>3</sub> Cl	0.1%
Ethanol	64-17-5	Alcohol	C <sub>2</sub> H <sub>5</sub> OH	10.0%

### SECTION 3: PHYSICAL DATA

<b>Appearance:</b> Red liquid with metallic green sheen	<b>pH:</b> N/AV	<b>Vapor Density:</b> N/AV
<b>Boiling Point:</b> N/AV	<b>Solubility in Water:</b> Appreciable	<b>Flash Point:</b> 51°C (124°F) cc
<b>Melting Point:</b> N/AV	<b>Vapor Pressure:</b> N/AV	<b>Evaporation Rate:</b> N/AV
<b>Odor:</b> Alcohol, sweet	<b>Specific Gravity:</b> N/AV	

### SECTION 4: FIRE AND EXPLOSION HAZARD

**Flammable:** Yes

**Flammable Limits:** Upper: N/AV Lower: N/AV

**Extinguish Media:**  
CO<sub>2</sub>, dry chemical or water

**Special Hazards:**  
Do not use high pressure water stream.

**Unusual Fire and Explosion Hazards:**  
None

### SECTION 5: REACTIVITY DATA

Stable:  Unstable:

**Conditions to Avoid:**  
Heat, sparks, open flame

**Materials to Avoid:**  
 Water -  
 Acids -  
 Bases -  
 Corrosives -  
 Oxidizers -  
 Other: Concentrated nitric and sulfuric acids, aldehydes, halogens

**Hazardous Decomposition Products:**  
Carbon monoxide, carbon dioxide

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**SECTION 6: HEALTH HAZARD DATA**


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To the best of our knowledge, the chemical, physical, and toxicological properties of this mixture have not been thoroughly investigated. Presented below are specific data on each of the subcomponent ingredients:

<u>Hazardous Component</u>	<u>%</u>	<u>Threshold Limit Value</u>	<u>TXDS</u>
Basic Fuchsin	0.1%	N/AV	N/AV (Possible carcinogen)
Ethanol	10%	1000 ppm	N/AV

**Effects of Overexposure (Acute and Chronic):**

Possible carcinogen.

May be irritating if inhaled. May cause inebriation, headache, nausea, vomiting, drowsiness.

Cannot be made non-poisonous.

**Carcinogenicity:** These products do not contain any carcinogens at 0.1% or greater.

**First Aid Procedure:**

**Skin Contact:** Wash with soap and copious amounts of water.

**Eye Contact:** Flush with copious of water for at least 15 minutes.

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration; if breathing is difficult, give oxygen; seek medical attention.

**Ingestion:** Do not induce vomiting. Seek medical attention.

In all cases of overexposure seek medical attention.

Wash contaminated clothing before reuse.

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**SECTION 7: SPILL OR LEAK PROCEDURES AND DISPOSAL**


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**Steps to be taken if Material is Released or Spilled:**

Pick up using an absorbent material. Wash spill area after pick up.

**Waste Disposal Method:**

Observe all local, provincial, state, and federal regulations.

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**SECTION 8: SPECIAL PROTECTION INFORMATION**


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Provide adequate general mechanical and local exhaust ventilation.

Avoid prolonged or repeated inhalation of vapor.

Protect eyes, skin, and clothing with safety goggles and gloves.

Wash thoroughly after handling.

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**SECTION 9: SPECIAL HANDLING AND STORAGE PRECAUTIONS**


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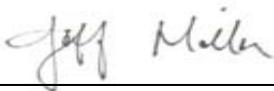
Keep container tightly closed. Protect against physical damage. Store in a cool, dry place.

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**SECTION 10: MSDS PREPARATION AND INFORMATION**


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Date Issued: 10/90  
 Current Revision: 1/08  
 Revised By: Jeff Miller

Authorized Signature:  \_\_\_\_\_

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## MATERIAL SAFETY DATA SHEET

### EMERGENCY ASSISTANCE - 24 hour

For emergency assistance involving chemicals call CHEMTREC (800) 424-9300.

### SECTION 1: MATERIAL INFORMATION

**Common Name:** **CRYSTAL VIOLET STAIN SOLUTION**  
**Synonyms:** Gram Crystal Violet; Gram Gentian Violet  
**Catalog Number:** R5812, R5813, R5814, R5815, R5816, R5817, R5818, R5820  
**CAS #:** N/AV  
**WARNING:** POISON, FLAMMABLE

### SECTION 2: HAZARDOUS INGREDIENTS

<u>Hazardous Components</u>	<u>CAS #</u>	<u>Chemical Family</u>	<u>Molecular Formula</u>	<u>Approximate Concentration</u>
Ammonium Oxalate	6009-70-7	Salt of organic acid	C <sub>2</sub> H <sub>8</sub> N <sub>2</sub> O <sub>4</sub>	0.8%
Crystal Violet	548-62-9	Basic Dye(s)	C <sub>25</sub> H <sub>30</sub> ClN <sub>3</sub>	2%
Ethanol	64-17-5	Alcohol	C <sub>2</sub> H <sub>5</sub> OH	20%

### SECTION 3: PHYSICAL DATA

<b>Appearance:</b> Purple liquid with metallic green sheen	<b>pH:</b> N/AV	<b>Vapor Density:</b> N/AV
<b>Boiling Point:</b> N/AV	<b>Solubility in Water:</b> Very	<b>Flash Point:</b> 44°C (112°F) cc
<b>Melting Point:</b> N/AV	<b>Vapor Pressure:</b> N/AV	<b>Evaporation Rate:</b> N/AV
<b>Odor:</b> Ethanol	<b>Specific Gravity:</b> N/AV	

### SECTION 4: FIRE AND EXPLOSION HAZARD

**Flammable:** Yes

**Flammability Limits:**

Upper: N/AV      Lower: N/AV

**Extinguish Media:**

Water spray, CO<sub>2</sub>, dry chemical, "alcohol" or polymer foam. Water spray to cool exposed containers and dispense vapors.

**Special Hazards:**

Wear self-contained, positive-pressure breathing apparatus and full protective clothing.

**Unusual Fire and Explosion Hazards:**

Emits toxic fumes under fire conditions.

### SECTION 5: REACTIVITY DATA

Stable:       Unstable:

**Conditions to Avoid:**

Heat, sparks, open flame

**Materials to Avoid:**

- Water -
- Acids -
- Bases -
- Corrosives -
- Oxidizers -
- Other:

**Hazardous Decomposition Products:**

Ammonia, carbon monoxide, carbon dioxide, nitrogen oxides, hydrogen chlorine gas, oxalic acid.

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**SECTION 6: HEALTH HAZARD DATA**


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To the best of our knowledge, the chemical, physical, and toxicological properties of this mixture have not been thoroughly investigated. Presented below are specific data on each of the subcomponent ingredients:

<u>Hazardous Component</u>	<u>%</u>	<u>Threshold Limit Value</u>	<u>TXDS</u>
Ammonium Oxalate	0.8%	N/AV	N/AV
Crystal Violet	2.0%	N/AV	ORL-RAT LD50: 420 mg/kg (possible carcinogen)
Ethanol	20.0%	1000 ppm	N/AV

**Effects of Overexposure (Acute and Chronic):**
**POISON**

May cause severe damage to kidneys if ingested. Will cause irritation to eyes, skin, mucous membranes and upper respiratory tract. Prolonged exposure can cause: nausea, headache and vomiting.

**Carcinogenicity:** These products do not contain any carcinogens at 0.1% or greater.

**First Aid Procedure:**

- Skin Contact:** Flush with water, wash with soap and water.  
**Eye Contact:** Flush with water for 15 minutes, get immediate medical attention.  
**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration; if breathing is difficult, give oxygen; seek medical attention.  
**Ingestion:** Do not induce vomiting. Seek medical attention.

In all cases of overexposure seek medical attention.  
Wash contaminated clothing before reuse.

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**SECTION 7: SPILL OR LEAK PROCEDURES AND DISPOSAL**


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**Steps to be taken if Material is Released or Spilled:**

Ventilate area; Using protective clothing and gloves, take up with absorbent. Wash spill site after material pick up is complete.

**Waste Disposal Method:**

Observe all local, provincial, state, and federal regulations.

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**SECTION 8: SPECIAL PROTECTION INFORMATION**


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Provide adequate general mechanical and local exhaust ventilation.  
Avoid prolonged or repeated inhalation of vapor.  
Protect eyes, skin, and clothing with safety goggles and gloves.  
Wash thoroughly after handling.

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**SECTION 9: SPECIAL HANDLING AND STORAGE PRECAUTIONS**


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Keep container tightly closed. Protect against any physical damage. Store in a cool, dry place, away from oxidizing material.

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**SECTION 10: MSDS PREPARATION AND INFORMATION**


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Date Issued: 9/89  
Current Revision: 1/08  
Revised By: Jeff Miller

Authorized Signature:  \_\_\_\_\_

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## MATERIAL SAFETY DATA SHEET

**EMERGENCY ASSISTANCE - 24 hour**

For emergency assistance involving chemicals call CHEMTREC (800) 424-9300.

**SECTION 1: MATERIAL INFORMATION**

**Common Name:** GRAM DECOLORIZER  
**Synonyms:** Decolorizer  
**Catalog Number:** R5812, R5813, R5814, R5825, R5826, R5827, R5828  
**CAS #:** N/AV  
**WARNING:** POISON, FLAMMABLE

**SECTION 2: HAZARDOUS INGREDIENTS**

<u>Hazardous Components</u>	<u>CAS #</u>	<u>Chemical Family</u>	<u>Molecular Formula</u>	<u>Approximate Concentration</u>
Ethanol, denatured	64-17-5	Alcohol	C <sub>2</sub> H <sub>5</sub> OH	75%
Acetone	67-64-1	Ketone	(CH <sub>3</sub> ) <sub>2</sub> CO	25%

**SECTION 3: PHYSICAL DATA**

<b>Appearance:</b> Colorless liquid	<b>pH:</b> N/AV	<b>Vapor Density:</b> 1.6 (air = 1)
<b>Boiling Point:</b> 73°C	<b>Solubility in Water:</b> Appreciable	<b>Flash Point:</b> -16°C (TCC)
<b>Melting Point:</b> N/AV	<b>Vapor Pressure:</b> 77.8 mm at 20°C	<b>Evaporation Rate:</b> N/AV
<b>Odor:</b> Acetone	<b>Specific Gravity:</b> 0.801 (water = 1)	

**SECTION 4: FIRE AND EXPLOSION HAZARD**

**Flammable:** Yes: Flammable liquid

**Flammability Limits:**  
 Upper: N/AV      Lower: 2.6°C by volume in air

**Extinguish Media:**  
 CO<sub>2</sub>, Dry chemical, water spray, foam

**Special Hazards:**  
 Wear self-contained, positive-pressure breathing apparatus and full protective clothing.

**Unusual Fire and Explosion Hazards:**  
 Moderate explosion hazard when vapor is exposed to flame.

**SECTION 5: REACTIVITY DATA**

**Stable:**       **Unstable:** \_\_\_\_\_  
**Conditions to Avoid:**  
 Heat, sparks, open flame, incandescence fire  
**Materials to Avoid:**  
 Water -  
 Acids -  
 Bases -  
 Corrosives -  
 Oxidizers - Permanganates, peroxides  
 Other: CrO, CR (OCl)<sub>2</sub>, NOCl

**Hazardous Decomposition Products:**  
 Carbon monoxide and/or carbon dioxide

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**SECTION 6: HEALTH HAZARD DATA**


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To the best of our knowledge, the chemical, physical, and toxicological properties of this mixture have not been thoroughly investigated. Presented below are specific data on each of the subcomponent ingredients:

<u>Hazardous Component</u>	<u>%</u>	<u>Threshold Limit Value</u>	<u>TXDS</u>
Acetone	25%	590 mg/m <sup>3</sup>	ORL-HMN LDLO: 50 mg/kg SKN-RBT LD50: 20 mg/kg INH-HMN TCLO: 500 ppm
Ethanol, denatured	75%	1000 ppm	N/AV

**Effects of Overexposure (Acute and Chronic):**
**POISON**

Prolonged exposure may cause headache, dizziness, irritation of eyes and respiratory tract, loss of strength and narcosis. May cause severe eye irritation.

**Carcinogenicity:** These products do not contain any carcinogens at 0.1% or greater.

**First Aid Procedure:**

**Skin Contact:** Wash with copious amounts of soap and water.

**Eye Contact:** Flush with copious amounts of water for 15 minutes.

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration; if breathing is difficult, give oxygen; seek medical attention.

**Ingestion:** Seek medical attention immediately.

In all cases of overexposure seek medical attention.

Wash contaminated clothing before reuse.

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**SECTION 7: SPILL OR LEAK PROCEDURES AND DISPOSAL**


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**Steps to be taken if Material is Released or Spilled:**

Ventilate area; using protective apparatus, take up with absorbent. Wash spill site after material pickup is complete.

**Waste Disposal Method:**

Observe all local, provincial, state, and federal regulations.

Refer to attachment regarding requirements for reporting emissions of acetone.

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**SECTION 8: SPECIAL PROTECTION INFORMATION**


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Provide adequate general mechanical and local exhaust ventilation.

Avoid prolonged or repeated inhalation of vapor.

Protect eyes, skin, and clothing with safety goggles and gloves.

Wash thoroughly after handling.

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**SECTION 9: SPECIAL HANDLING AND STORAGE PRECAUTIONS**


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Keep container tightly closed. Protect against physical damage. Store in cool, well-ventilated area away from heat, sparks, flame and other sources of ignition.

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**SECTION 10: MSDS PREPARATION AND INFORMATION**


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Date Issued: 9/89  
Current Revision: 1/08  
Revised By: Jeff Miller

Authorized Signature: \_\_\_\_\_


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## MATERIAL SAFETY DATA SHEET

**EMERGENCY ASSISTANCE - 24 hour**

For emergency assistance involving chemicals call CHEMTREC (800) 424-9300.

**SECTION 1: MATERIAL INFORMATION**

Common Name: **GRAM IODINE, 50X**  
 Synonyms: N/AP  
 Catalog Number: R5812, R5814, R5835, R5836, R5837, R5838, R5840  
 CAS #: N/AV  
**WARNING:** POISON

**SECTION 2: HAZARDOUS INGREDIENTS**

<u>Hazardous Components</u>	<u>CAS #</u>	<u>Chemical Family</u>	<u>Molecular Formula</u>	<u>Approximate Concentration</u>
Iodine	7553-56-2	Halide	I <sub>2</sub>	16.7%
Potassium Iodide	7681-11-0	Inorganic Salt	KI	33.3%

**SECTION 3: PHYSICAL DATA**

Appearance:	Brown liquid	pH:	N/AV	Vapor Density:	N/AV
Boiling Point:	N/AV	Solubility in Water:	Appreciable	Flash Point:	N/AV
Melting Point:	N/AV	Vapor Pressure:	N/AV	Evaporation Rate:	N/AV
Odor:	Pungent	Specific Gravity:	N/AV		

**SECTION 4: FIRE AND EXPLOSION HAZARD**

Flammable: No

Flammable Limits:

Upper: N/AP Lower: N/AP

Extinguish Media:

Dry chemical powder

Special Hazards:

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Unusual Fire and Explosion Hazards:

Emits highly toxic fumes under fire conditions.

**SECTION 5: REACTIVITY DATA**

Stable:  Unstable:

Conditions to Avoid:

Heat, sparks, open flame

Materials to Avoid:

Water -

Acids -

Bases -

Corrosives -

Oxidizers -

Other: Bromine Trifluoride, Chlorine Trifluoride, Fluorine Perchlorate, Magnesium, Zinc, Ammonia, Corrodes Steel

Hazardous Decomposition Products:

Toxic fumes

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**SECTION 6: HEALTH HAZARD DATA**


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To the best of our knowledge, the chemical, physical, and toxicological properties of this mixture have not been thoroughly investigated. Presented below are specific data on each of the subcomponent ingredients:

Hazardous Component	%	Threshold Limit Value	TXDS
			Iodine
Potassium Iodide	33.3	N/AV	

**Effects of Overexposure (Acute and Chronic):**

Harmful if swallowed, inhaled, or absorbed through skin. Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes and skin.

Inhalation may be fatal as a result of spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath headache, nausea and vomiting. Exposure can cause: stomach pains, vomiting, diarrhea, damage to the eyes, and dermatitis.

**Carcinogenicity:** These products do not contain any carcinogens at 0.1% or greater.

**First Aid Procedure:**

**Skin Contact:** Flush with copious amounts of water, then wash with soap and water.

**Eye Contact:** Flush with copious amounts of water for 15 minutes.

**Inhalation:** Remove to fresh air. If not breathing, give artificial respiration; if breathing is difficult, give oxygen; seek medical attention.

**Ingestion:** Do not induce vomiting, seek medical attention immediately.

In all cases of overexposure seek medical attention.

Wash contaminated clothing before reuse.

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**SECTION 7: SPILL OR LEAK PROCEDURES AND DISPOSAL**


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**Steps to be taken if Material is Released or Spilled:**

Evacuate and ventilate area. Using protective apparatus, take up with absorbent (preferably dry lime or soda ash). Wash spill site after material pickup is complete.

**Waste Disposal Method:**

Observe all local, provincial, state, and federal regulations.

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**SECTION 8: SPECIAL PROTECTION INFORMATION**


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Provide adequate general mechanical and local exhaust ventilation.

Avoid prolonged or repeated inhalation of vapor.

Protect eyes, skin, and clothing with safety goggles and gloves.

Wash thoroughly after handling.

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**SECTION 9: SPECIAL HANDLING AND STORAGE PRECAUTIONS**


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Keep container tightly closed. Protect against physical damage. Store in a cool, dry place.

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**SECTION 10: MSDS PREPARATION AND INFORMATION**


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Date Issued: 9/89  
Current Revision: 1/08  
Revised By: Jeff Miller

**Authorized Signature:**  \_\_\_\_\_

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