SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Gram Crystal Violet Solution
SYNONYMS: None
PRODUCT CODES: ES800 (Kit), ES801 (Kit), ES802, ES808

MANUFACTURER: Azer Scientific, Inc.
ADDRESS: 701 Hemlock Rd, Morgantown, PA 19543

CHEMTREC PHONE: 800-424-9300
SUPPORT: 610-524-5810
FAX: 610-901-3046

PRODUCT USE: Biological Stain
PREPARED BY: CB

SECTION 1 NOTES:

SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATION: Flammable liquid Category 4; Skin Irritation Category 3; Serious Eye Irritation Category 2A; Carcinogenicity Category 2; Hazardous to aquatic environment long term/chronic effects Category 3

Signal Word: Warning!

Hazard Phrases	
H227	Combustible liquid.
H316	Causes mild skin irritation.
H319	Causes serious eye irritation.
H351	Suspected of causing cancer.
H412	Harmful to aquatic life with long lasting effects.

Precautionary Phrases	
P210	Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No. smoking.
P260	Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P280	Wear protective gloves/ eye protection/ face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313	IF exposed or concerned: Get medical advice/attention.
P273	Avoid release to the environment.

SECTION 2 NOTES:

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:	**CAS NO.**	**% WT**
Ethanol	**64-17-5**	**<11**
Isopropyl Alcohol	**67-63-0**	**<1**

Crystal Violet	**17372-87-1**	**<1**
Phenol	**108-95-2**	**<0.5**
Water	**7732-18-5**	**<90**

SECTION 3 NOTES:

SECTION 4: FIRST AID MEASURES

EYES: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if irritation persists.

SKIN: In case of contact, flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Get medical attention if irritation persists.

INGESTION: Call medical doctor or poison control center immediately. Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

INHALATION: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if you feel unwell.

SECTION 4 NOTES:

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABILITY OF THE PRODUCT: Combustible liquid
FLASH POINT: Not available
AUTOIGNITION TEMPERATURE: Not available

NFPA HAZARD CLASSIFICATION
HEALTH:1 FLAMMABILITY: 1 REACTIVITY: 0
OTHER:

HMIS HAZARD CLASSIFICATION
HEALTH:1 FLAMMABILITY: 1 REACTIVITY: 0
PROTECTION:

EXTINGUISHING MEDIA: Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide
NOT SUITABLE: Do not use water jet.
SPECIAL FIRE FIGHTING PROCEDURES: Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst with the risk of a subsequent explosion. Run-off to sewer may create fire or explosion hazard.
HAZARDOUS DECOMPOSITION PRODUCTS: Oxides of carbon expected to be the primary combustion product.

SECTION 5 NOTES:

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES:

Small spill and leak: Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container.
Large spill and leak: Shut off all ignition sources. Stop leak if without risk. Move containers from spill area. Approach release

from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

SECTION 6 NOTES:

SECTION 7: HANDLING AND STORAGE

HANDLING: Do not get in eyes, on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate.
STORAGE: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container, protected from direct sunlight. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store and use away from heat, sparks, open flame or any other ignition source. Store at Room Temperature.

SECTION 7 NOTES:

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING CONTROLS: General mechanical ventilation or laboratory fume hood. Ensure that eyewash stations and quick drench showers are close to the workstation.

RESPIRATORY PROTECTION: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

EYE PROTECTION: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: splash goggles

SKIN PROTECTION: Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: lab coat
HANDS: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Recommended: Neoprene

ENVIRONMENTAL EXPOSURE CONTROLS: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

WORK HYGIENIC PRACTICES: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

EXPOSURE GUIDELINES:

Reagent	CAS#	OSHA PEL TWA	Note
Ethyl Alcohol	64-17-5	1000 ppm (1,900 mg/m^3)	29 CFR 1910.1000 Table Z-1 Limits for Air Containments
Isopropyl Alcohol	67-63-0	400ppm (980 mg/m^3)	
Phenol	108-95-2	5 ppm (19mg/m^3)	

ACGIH Threshold Limit values (TLVs):

Reagent	CAS#	ACGIH PEL TWA	ACGIH STEL	Note

Ethyl Alcohol	64-17-5		1000 ppm	Upper respiratory tract irritation. Confirmed animal carcinogen with unknown relevance to humans
Isopropyl Alcohol	67-63-0	200 ppm	400 ppm	
Phenol	108-95-2	5 ppm	250ppm (328 mg/m^3)	Absorbed through skin.

SECTION 8 NOTES:

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Violet/purple
ODOR: Alcohol like
PHYSICAL STATE: liquid
pH AS SUPPLIED: 3.5
BOILING POINT: Not available
MELTING POINT: Not available
FREEZING POINT: Not available
VAPOR PRESSURE (mmHg): Not available
VAPOR DENSITY (AIR = 1): Not available
EVAPORATION RATE: <11%
SOLUBILITY IN WATER: Soluble in water
MOLECULAR WEIGHT: Mixture
VISCOSITY: Not established

SECTION 9 NOTES:

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Product is stable under normal conditions of use.
CONDITIONS TO AVOID (STABILITY): Avoid heat, sparks, flames, and all other sources of ignition.
INCOMPATIBILITY (MATERIAL TO AVOID): Highly reactive or incompatible with the following materials: oxidizing materials and metals. Reactive or incompatible with the following materials: reducing materials, acids.
HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: oxides of carbon.
HAZARDOUS POLYMERIZATION: No hazardous polymerization
CONDITIONS TO AVOID (POLYMERIZATION): N/A

SECTION 10 NOTES:

SECTION 11: TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50: Ethyl Alcohol: (Rat) LD50=7060 mg/kg
Phenol: (Rat) LD50=340 mg/kg
Inhalation LC50: Ethyl Alcohol: (Rat) LC50=20000 ppm/10hr
Phenol (Rat) LC50=316 mg/m^3 4 hr.
Dermal LD50: Phenol: (Rabbit) LD50=630 mg/kg
Other information on acute toxicity: no data available
Skin corrosion/irritation: no data available
Serious eye damage/eye irritation
Eyes: no data available
Respiratory or skin sensitization: no data available

Germ cell mutagenicity: no data available
Carcinogenicity: no data available
Specific target organ toxicity - single exposure (Globally Harmonized System): no data available
Specific target organ toxicity - repeated exposure (Globally Harmonized System): no data available
Aspiration hazard: no data available
Potential health effects
Inhalation Harmful if inhaled. Causes respiratory tract irritation.
Ingestion May be harmful if swallowed.
Skin May be harmful if absorbed through skin.
Eyes Causes eye irritation.

SIGNS AND SYMPTOMS OF EXPOSURE: Effects due to ingestion may include: Gastrointestinal disturbance, Headache, Nausea, Vomiting, Dizziness, Weakness, Confusion, Drowsiness, Unconsciousness. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.
ROUTES OF ENTRY: Skin/eye contact, inhalation, and ingestion.
TARGET ORGANS: Kidney, Liver, Heart, Central nervous system

SECTION 11 NOTES:

SECTION 12: ECOLOGICAL INFORMATION

TOXICITY:
Acute fish Toxicity (Ethanol)
LC50 Oncorhynchus mykiss (rainbow trout) >10,000 mg/l 96hr
LC50 Pimephales promelas (fathead minnow) >13,400 mg/l 96hr
PERSISTANCE AND DEGRADABILITY: Biodegradation is expected
BIOACCUMULATIVE POTENTIAL: Bioaccumulation is unlikely.
MOBILITY IN SOIL: No data available
PBT and vPvB ASSESSMENT: Not required.

SECTION 12 NOTES:

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Unused product: dispose as a regulated hazardous waste. Spent product or spill clean up-follow all provincial, local, state, and federal regulations.
RCRA HAZARD CLASS: Not classified

SECTION 13 NOTES:

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION: NOT REGULATED
TDG: NOT REGULATED
IATA: NOT REGULATED
IMDG/IMP: NOT REGULATED

SECTION 15: REGULATORY INFORMATION

United States
HCS Classification: Combustible liquid, Toxic material, Irritating material, Target organ effects

U.S. Federal regulations:
TSCA 8(a) IUR: Listed on inventory.
United States inventory (TSCA 8b): Listed on inventory.

SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: No products were found.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification:
Acute Health Hazard; Chronic Health Hazard, Fire Hazard
SARA 313 Form R – Reporting: The following components are subject to reporting levels established by SARA Title III, Section 313:

DEA List I & II Chemicals
(Precursor Chemicals): Not Listed

CERCLA: Phenol CAS#108-95-2 RQ: 1,000 lbs

RTK STATES: Phenol CAS#108-95-2 PA, NJ, MA, RI Ethanol CAS#64-17-5 PA, NJ, MA, FL
Isopropyl Alcohol CAS#67-63-0 CT, MA, NJ, PA

California Prop. 65
WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm: None

CANADA
WHMIS (Canada): Class D2A: Very toxic material causing other toxic effects
Class B3: Combustible liquid

Canadian lists:
CEPA Toxic substances: The following components are listed: None
Canadian ARET: None of the components are listed.
Canadian NPRI: The following components are listed:

CEPA DSL / CEPA NDSL: All components are listed or exempted.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations
International lists:
Australia inventory (AICS): All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: All components are listed or exempted.
Korea inventory: All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.

SECTION 16: OTHER INFORMATION

National Fire Protection Association (U.S.A.)

DISCLAIMER: This Safety Data Sheet has been prepared in accordance with the Globally Harmonized System for the Classification and Labelling of Chemicals (GHS). To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries makes any warranty of merchantability or any other warranty, expressed or

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