SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Saccomanno Fluid
SYNONYMS: Saccomanno Fixative
PRODUCT CODES: ES727, ES727-16, PFS-20, PFS-120

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: Tissue Fixative
PREPARED BY: CB

SECTION 1 NOTES:

SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATION: Flammable Liquid Category 3, Eye irritation Category 2B, Skin Irritation Category 2; Specific Target Organ Toxicity, (Single Exposure) Respiratory Tract, Category 3; Specific organ toxicity, repeated exposure Category 2

Signal Word: Danger!

Hazard Phrases	
H226	Flammable liquid and vapor.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H335+H336	May cause respiratory irritation, drowsiness, or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary Phrases	
P202	Do not handle until all safety precautions have been read and understood.
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/ protective clothing/ eye protection/ face protection.
P264	Wash hands thoroughly after handling.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P307+P311	IF exposed: Call a POISON CENTER or doctor/ physician.

SECTION 2 NOTES:

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT:	CAS NO.	% WT
SDA-3A, (methanol)	64-17-5, 67-56-1	50
Isopropyl Alcohol	67-63-0	4-5
PEG	25322-68-3	<1
Tartrazine	1934-21-0	<1
Methylene Blue trihydrate	7220-79-3	<1

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 immediately.

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. If skin irritation occurs: Get medical attention/advice.

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.

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 symptoms persist.

SECTION 4 NOTES:

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABILITY OF THE PRODUCT: Mixture is a 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.
FLASH POINT: 54°F
AUTOIGNITION TEMPERATURE: Not available

NFPA HAZARD CLASSIFICATION
HEALTH:2 FLAMMABILITY: 3 REACTIVITY: 0
OTHER:

HMIS HAZARD CLASSIFICATION
HEALTH:2 FLAMMABILITY: 3 REACTIVITY: 0
PROTECTION:

EXTINGUISHING MEDIA: Small fire – use DRY chemical powder. Large fire – use alcohol resistant foam, water spray or fog.
NOT SUITABLE: Do not use water jet.
SPECIAL FIRE FIGHTING PROCEDURES: None known.
HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide
SECTION 5 NOTES:

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES:

Small spill and leak: Dilute with water and mop, or absorb with an inert dry material and place in appropriate waste disposal container.
Large spill and leak: Keep away from heat and ignition sources. Stop leak if without risk. Absorb with DRY earth, sand, or other non-combustible material. Avoid skin and eye contact. Prevent entry into sewers, basements or confined areas; dike if needed. Ensure airborne concentrations of formaldehyde do not exceed published exposure limits. Additional protective equipment such as full-face respirator, full body suit and boots may be required.

SECTION 6 NOTES:

SECTION 7: HANDLING AND STORAGE

HANDLING: Avoid contact with eyes and skin. Do not breathe vapor or mist. Avoid prolonged or repeated contact with skin. If potential for splashing exists, protect skin by using sleeve protectors, aprons and face-shield. Immediately remove contaminated clothing. Wash thoroughly after handling.
STORAGE: Keep containers closed and out of reach of children. Ground all equipment containing material. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must b e carefully resealed and kept upright to prevent leakage. 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.
PERSONAL PROTECTIVE MEASURES: Wear gloves, lab coat, eye protection and impervious footwear. Approved/certified respirator if airborne concentrations exceed exposure limits.
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:
OSHA Permissible Exposure Limits (PELs):

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	400 ppm	
Methyl Alcohol	67-56-1	200ppm (260 mg/m^3)	Absorbed through skin.

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	400ppm	
Methyl Alcohol	67-56-1	200ppm (260 mg/m^3)	250ppm (328 mg/m^3)	Absorbed through skin.

SECTION 8 NOTES:

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear, green
ODOR: Characteristic, sweet alcoholic
PHYSICAL STATE: liquid
pH AS SUPPLIED: Not available
BOILING POINT: Approx. 180°F
MELTING POINT/FREEZING POINT: Not available
VAPOR PRESSURE (mmHg): @20°C: 15.7
VAPOR DENSITY (AIR = 1): 1.5
EVAPORATION RATE: Not available
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): Reactive with oxidizing materials, acids and alkalis.
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: Heat, open flame

SECTION 10 NOTES:

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Oral: Methyl Alcohol: LD50 (oral, mouse) = 0.4 g/kg, LD50 (oral, rat) = 6.2-13 g/kg LD50 (oral, rabbit) = 14.4 g/kg
Ethyl alcohol: LC50 (Oral, rat) = 7060 mg/kg BWT, LDlo (Oral, human) = 1400mg/kg BWT
Inhalation: Formaldehyde: LC50 (Inhalation, mouse) = 454 mg/m3/4H
Ethyl Alcohol: LC50 (Inhalation, rat) = 20,000 ppm, 10hrs
Methyl Alcohol: LC50 (Inhalation, rat) = 128.2 mg/l 4 hrs; LC50 (Inhalation, rat) = 87.6 mg/l 6 hrs
Dermal: Methyl Alcohol: Rabbit LD50 20 ml/kg
Skin corrosion/irritation: Ethyl Alcohol: Draize test, rabbit, skin: 20 mg/24H Moderate
Eyes: Ethyl alcohol: Draize test, rabbit, eye: 500 mg/24H Reaction - Mild Rabbit, eye: 500 mg Reaction – Severe
Respiratory or skin sensitization: Isopropyl alcohol: Rabbit = Mild skin irritation
Germ cell mutagenicity: No data available
Carcinogenicity: (NTP, IARC, OSHA):
Methanol: Not classified as a human carcinogen.
Ethanol: Not classified as a human carcinogen
Aspiration hazard: no data available

POTENTIAL HEALTH EFFECTS

EYES: Hazardous in case of eye contact (irritant). May cause chemical conjunctivitis or corneal damage.
SKIN: May be toxic if absorbed through skin.
INGESTION: May be toxic if swallowed.
INHALATION: Hazardous in case of inhalation (lung irritant).

CHRONIC HEALTH HAZARDS: Chronic effects on humans, damage to gastro/respiratory tract, skin, central nervous system, and eyes.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Dermatitis, emphysema, bronchitis and conjunctivitis.

SIGNS AND SYMPTOMS OF EXPOSURE*:* Irritation eyes, skin, nose, mucous membrane; headache, dermatitis
ROUTES OF ENTRY: Skin/eye contact, inhalation, ingestion
TARGET ORGANS: Eyes, skin, central nervous system, optic nerve, liver, spleen and blood.

SECTION 11 NOTES:

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL TOXICITY:
Fish: Rainbow trout: LC50 = 12900-15300 mg/L; 96 hr. Flow-through @ 24-24.3°C
Fish: Rainbow trout: LC50 = 11200 mg/L; 24 hr. Fingerling (Unspecified)
Bacteria: Phytobacterium phosphorus: EC50 = 34900 mg/L; 5-30 min; Microtox test
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: U122

SECTION 13 NOTES:

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION:
UN No. UN1170
Proper Shipping Name: Ethanol Solutions
Hazard Class: 3
Packing Group: II
Label Statement: Flammable liquid

IMDG
UN No. UN1170
Proper Shipping Name: Ethanol Solutions
Hazard Class: 3
Packing Group: II
Label Statement: Flammable liquid
EMS-No: F-E, S-D
Marine pollutant: No

IATA
UN No. UN1170
Proper Shipping Name: Ethanol Solutions
Hazard Class: 3
Packing Group: II
Label Statement: Flammable liquid

SECTION 15: REGULATORY INFORMATION

United States
HCS Classification: 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
SARA 313 Form R – Reporting: The following components are subject to reporting levels established by SARA Title III, Section 313: METHANOL (CAS# 67-56-1)

DEA List I & II Chemicals
(Precursor Chemicals): Not Listed
CERCLA: Methanol CAS-No. 67-56-1. RQ: 5,000 lbs

RTK STATES: Methyl Alcohol CAS 67-56-1 CT, MA, NJ, PA, RI Ethyl Alcohol CAS 64-17-5 PA, MA, NJ

California Prop. 65: **WARNING:** This product can expose you to chemicals including Methanol, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

CANADA
WHMIS (Canada): Class D1: Materials causing immediate and serious toxic effects.
Class D2-B: Material causing other toxic effects (Toxic).
Class E: Corrosive material

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: Methanol
Volatile organic compounds

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 (NFPA)

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 implied, which respect to such information, and we assume no liability resulting from its use. In no event shall Azer Scientific be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages resulting from use of or reliance upon this information.

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