



F.S. Fix™

1. Identification

Product Name: F.S. Fix™

Item #: 6500, 6501, 6505

Web SDS: S20

Synonyms: N/A

Recommended Use: Tissue Fixation

Restrictions on Use: N/A

Manufacturer:

In Case of Emergency:

BBC Biochemical

Chemtec US 1-800-424-9300

409 Eleanor Lane,

Chemtec International 703-527-3887

Mount Vernon, WA 98273

1-800-635-4477

2. Hazards Identification

OSHA Hazard Classification(s):

Acute Toxicity - Oral - Category 3

Acute Toxicity - Inhalation - Category 3

Skin Corrosion - Category 1C

Eye Damage - Category 1

Germ Cell Mutagenicity - Category 1B

Toxic to Reproduction - Category 1B

Specific Target Organ Toxicity (single exposure) - Category 2

Specific Target Organ Toxicity (repeated exposure) - Category 2

Sensitization - Skin - Category 1A

Sensitization - Respiratory - Category 1A

Carcinogenicity - Category 1A

Flammable Liquids - Category 2

Signal Word: Danger

Hazard Statement(s): Toxic if swallowed. Toxic if inhaled. Causes severe skin burns and eye damage. Causes serious eye damage. May cause genetic defects. May damage fertility or the unborn child. May cause damage to organs(lungs,nose,respiratory system). May cause damage to organs(lungs, nose, respiratory system, central nervous system, liver, blood) through prolonged or repeated exposure. May cause an allergic skin reaction. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause cancer. Highly flammable liquid and vapor.

Pictogram(s):



Precautionary Statement(s): Prevention: Wash body thoroughly after handling. Do not eat, drink or smoke when using this product. Avoid breathing dust, vapors. Use only outdoors or in a well-ventilated area. Do not breathe dusts or mists. Wear protective gloves, protective clothing, eye protection and face protection. Wear eye protection, face protection. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Do not breathe dust, vapors. Contaminated work clothing must not be allowed out of the workplace. Wear protective gloves. Wear NIOSH approved respiratory protection.

Response: If swallowed: Immediately call a doctor. Rinse Mouth. Specific treatment (see first aid section on this label). If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a doctor. If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Take off all contaminated clothing and wash it before reuse. Immediately call a doctor. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing If exposed or concerned: Get medical attention. If exposed or concerned: Call a doctor. Call a doctor if you feel unwell. If on skin: Wash with plenty of water. If skin irritation or rash occurs: Get medical attention. If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a doctor.

Storage: Store locked up. Store in a well-ventilated place. Keep container tightly closed.

Disposal: Dispose of contents/container in accordance with local regulations.

Descriptions of Hazards not otherwise classified: N/A

Percent of mixture with unknown acute toxicity: N/A

**3. Composition and Information on Ingredients**

Chemical Name	Common Name	CAS #	Concentration %
Water		7732-18-5	Trade Secret
Ethyl Alcohol		64-17-5	Trade Secret
Methyl Alcohol		67-56-1	Trade Secret
Isopropyl Alcohol		67-63-0	Trade Secret
Formaldehyde 37%		50-00-0	Trade Secret
Glacial Acetic Acid		64-19-7	Trade Secret
Select Buffers		Trade Secret	Trade Secret

4. First Aid Measures

Eye Contact: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin Contact: If on skin (or hair): Take off immediately all contaminated clothing and wash before reuse. Wash with plenty of water. If skin irritation occurs: Get medical advice/attention.

Inhalation: Remove to fresh air; give artificial respiration if breathing has stopped. Get medical advice/attention if you feel unwell.

Ingestion: Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.

Symptoms: Irritation eyes, nose, throat; headache, dizziness. May cause sensitization by skin or respiratory contact.

Recommendations for immediate medical care/special treatment: Get medical advice/attention if you feel unwell.

5. Fire- Fighting Measures

Extinguishing Media: Dry chemical, carbon dioxide, alcohol foam, water. Use water spray to cool fire-exposed containers and disperse vapors.

Fire Hazards (Chemical): OSHA classified Flammable Liquid Category 2

Special Protective Equipment: Fire fighters should use self-contained breathing apparatus and protective clothing.

Precautions for Firefighters: Carbon monoxide and unidentified organic compounds may be formed during combustion. Vapors can travel distances to ignition source and flash back. Cool fire exposed containers with water. Fine mist or spray may be flammable at temperatures below the flash point. When heated above the flash point this material emits flammable vapors which, when mixed with air, can burn or be explosive.

6. Accidental Release Measures

Emergency Procedures: Evacuate the area of all unnecessary personnel. Wear suitable protective equipment. Eliminate all sources of ignition and provide ventilation.

Protective Equipment: See section 8

Environmental Precautions: Prevent release to the environment by using barriers.

Containment and Clean-Up Procedures: Use barriers to prevent spreading. Collect spill in container. Call waste authorities.

7. Handling and Storage

Handling: Do not breathe vapors. Do not eat, drink or smoke when using this product. Keep away from heat, sparks, open flames, hot surfaces. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

Storage: Store locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool. Store away from heat, sparks and sources of ignition.

8. Exposure Controls/Personal Protection

OSHA Permissible Exposure Limits (PELs):

Reagent	CAS #	OSHA PEL TWA

**F.S. Fix™**

Ethyl Alcohol	64-17-5	1000ppm
Methyl Alcohol	67-56-1	200ppm
Isopropyl Alcohol	67-63-0	400ppm
Formaldehyde 37%	50-00-0	0.75ppm
Glacial Acetic Acid	64-19-7	10 ppm, 25 mg/m3 TWA

ACGIH Threshold Limit Values (TLVs):

Reagent	CAS #	ACGIH PEL TLV	ACGIH STEL
Ethyl Alcohol	64-17-5	1000ppm	1000ppm
Methyl Alcohol	67-56-1	200ppm	250ppm
Isopropyl Alcohol	67-63-0	200ppm	400ppm
Formaldehyde 37%	50-00-0	0.3 ppm (0.37 mg/m3)	
Glacial Acetic Acid	64-19-7	10 ppm, 25 mg/m3 TWA	15 ppm, 37 mg/m3 STEL

Engineering Controls: Use in a well ventilated area to prevent exposure. Maintain eyewash fountain and quick-drench facilities in work areas.

Personal Protective Measures: Wear gloves, lab coat, eye protection and impervious footwear. Contact lenses should not be worn when working with this material.

Special PPE Requirements: If ventilation hood not available wear respirator.

9. Physical and Chemical Properties Section

Appearance: Blue/Green, Liquid

Molecular Weight: N/A

Molecular Formula: N/A

pH: N/A

Boiling Point and Boiling Range: N/A

Melting Point/Freezing Point: N/A

Flash Point: 68°F

Specific Gravity/Relative Density: 0.880-0.890

Odor: Vinous

Odor Threshold: N/A

Color: Blue/Green

Flammability (solid/gas): N/A

Vapor Density: N/A

Upper/Lower flammability or explosive limits: N/A

Vapor Pressure: N/A

Evaporation Rate: N/A

Partition Coefficient: n-octanol/water: N/A

Viscosity: N/A

Auto-ignition temperature: N/A

Solubility: Miscible in water

Decomposition Temperature: N/A

10. Stability and Reactivity

Reactivity:

Chemical Stability: Stable

Conditions of Stability/Instability: Avoid source of heat.



Stabilizers needed: None

Safety issue indicated by appearance change: N/A

Other: N/A

Hazardous Reactions: N/A

Hazardous Polymerization: Does not occur

Conditions to avoid: Sources of heat.

Classes of Incompatible Materials: Oxidizers, Strong Acids, Strong Bases

Hazardous Decomposition Products: Thermal-oxidation degradation can produce oxides of carbon. Toxic gases and vapors (i.e. Carbon monoxide) may be released in a fire.

11. Toxicological Information

Likely Routes of Exposure

Eyes: Formaldehyde solution splashed in the eye can cause injuries ranging from transient discomfort to severe, permanent corneal clouding and loss of vision. The severity of the effect depends on the concentration of formaldehyde in the solution and whether or not the eyes are flushed with water immediately after the accident.

Skin: Formaldehyde is a severe skin irritant and sensitizer. Contact with formalin causes white discoloration, smarting, drying, cracking and scaling. Prolonged and repeated contact can cause numbness and hardening or tanning of the skin. Previously exposed persons may react to future exposure with an allergic eczema dermatitis or hives.

Inhalation: Formaldehyde is highly irritating to the upper respiratory tract and eyes. Concentrations of 0.5 to 2.0ppm may irritate the eyes, nose and throat of some individuals. Concentrations of 3 to 5ppm also cause tearing of the eyes and are intolerable to some persons. Dizziness, headache. Vapors are harmful with repeat exposure. Contains formaldehyde a respiratory sensitizer. May aggravate asthma or other lung diseases and respiratory system. Highly irritating to the upper respiratory tract and eyes.

Ingestion: Liquids containing 10 to 40 percent formaldehyde cause severe irritation and inflammation of the mouth, throat, and stomach. Severe stomach pains will follow ingestion with possible loss of consciousness and death. Ingestion of dilute formaldehyde solutions (0.03-0.04 percent) may cause discomfort in the stomach and pharynx. May cause diarrhea. May cause allergic reaction or blindness.

Signs or Symptoms of Exposure: Irritation to eyes, nose, throat; headache; dizziness. See above for more information. Nausea. Poison by ingestion. May cause damage to mouth, throat, stomach and gastrointestinal tract. May cause diarrhea. May cause allergic reaction or blindness. Note: The percent of formaldehyde by odor and eye irritation becomes less sensitive with time as one adapts to a formaldehyde. This can lead to overexposure if a worker is relying on formaldehyde's warning properties to alert him or her to the potential for exposure.

Effects from short term exposure (delayed, immediate, chronic): Irritation to the eyes, nose, throat; headache, dizziness, nausea. May cause cancer, mutagenic and reproductive effects. may effect organs after single or repeat exposure.

Acute Toxicity (Numerical Measures):

Formaldehyde: LD50 385mg/kg (oral, mouse); LD50 100mg/kg (oral, rat); LC50 200 mg/m3 (inh, rat); LC50 454 mg/m3/4H (inh, mouse) LD50 270 uL/kg (skin, rabbit); LD50 270 mg/kg (skin, rabbit)

Ethyl Alcohol: LD50(oral,mouse)=3450 mg/kg; LC50(inhalation,mouse)=39000 mg/m3/4H

Glacial Acetic Acid: LD50 (mammal, skin)=1060mg/kg; LD50 (rabbit, skin)=1060 mg/kg; LC50(inhalation, mouse)=5620 ppm/1H; LC50(inhalation, mouse)=5620 mg/m3/1H

Carcinogenicity (NTP, IARC, OSHA): Contains Formaldehyde IARC Group 1 Carcinogen associated with nasal sinus cancer, nasopharyngeal cancer, myeloid leukemia.

12. Ecological Information

Ecotoxicity: Formaldehyde is highly toxic to algae, protozoa and other unicellular organisms and slightly toxic to fish. In the atmosphere the material is rapidly degraded by photolysis and photooxidation. Formaldehyde is mobile in the soil. In water or soil, formaldehyde is biodegraded in a few days. Experiments performed on a variety of fish and shrimp show no bioconcentration of formaldehyde.

Effects Data for 100% Glacial Acetic Acid 96 h LC-50 (fathead minnow): > 100mg/L 48 h LC-50 (golden orfe): 410 mg/L 48 h LC-50 (mosquito fish): 251 mg/L 96 h LC-50 (daphnid): > 100 mg/L

Persistence and degradability: N/A

Bioaccumulation Potential (octanol-water partition coefficient, BCF): Oxygen Demand Data for 100% Glacial Acetic



Acid BOD-5: 340-880 mg/g BOD-20: 900 mg/g COD: 1,030 mg/g

Mobility in the soil: N/A

Adverse Environmental Effects: This material is a strongly acidic aqueous solution, and this property may cause adverse environmental effects.

13. Disposal Considerations

Recommended Disposal Containers: Check with your local waste authorities*

Recommended Disposal Methods: Do not dispose of in drains, check with your local waste authorities.*

Physical/Chemical Properties affecting Disposal: See section 2 and section 9 applicable information.*

Special Precautions for Landfill and Incineration Activities: Check with your local waste authorities.*

Waste Stream: Consult your local or regional authorities.*

14. Transport Information

UN Number: UN1993

UN Proper Shipping Name: Flammable Liquid, n.o.s. (Ethanol)

Transport Hazard Class(es): 3

Packing Group Number: II

Environmental Hazards (IMDG code):

Marine Pollutant: No

Transport in Bulk (IBC Code): N/A

Special Transport Precautions: N/A

15. Regulatory Information

OSHA:

DOT:

EPA:

CPSC:



Safety Data Sheet

F.S. Fix[™]

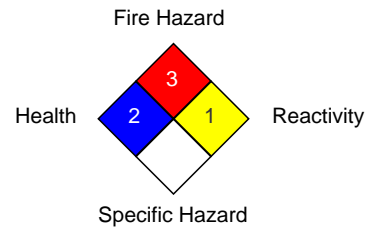
16. Other Information

Revision Date: 10/14/2014

NFPA

Health	2
Fire Hazard	3
Reactivity	1
Specific Hazard	

National Fire Protection Association (USA) NFPA



HMIS

Health	2
Flammability	3
Physical Hazard	1
Personal Protection	

Hazardous Material Information System HMIS

Health	2
Flammability	3
Physical Hazard	1
Personal Protection	

Notice to Reader:

To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

**F.S. Eosin™****1. Identification****Product Name:** F.S. Eosin™**Item #:** 6539, 6540, 6541**Web SDS:** S124**Synonyms:** N/A**Recommended Use:** Stain Solution**Restrictions on Use:** Not a beverage**Manufacturer:**BBC Biochemical
409 Eleanor Lane,
Mount Vernon, WA 98273
1-800-635-4477**In Case of Emergency:**Chemtec US 1-800-424-9300
Chemtec International 703-527-3887**2. Hazards Identification****OSHA Hazard Classification(s):**Skin Irritation - Category 2
Eye Irritation - Category 2A
Specific Target Organ Toxicity (single exposure) - Category 1
Specific Target Organ Toxicity (repeated exposure) - Category 2
Flammable Liquids - Category 2**Signal Word:** Danger**Hazard Statement(s):** Causes skin irritation. Causes serious eye irritation. Causes damage to organs (respiratory system). May cause damage to organs (respiratory system, central nervous system, liver, blood) through prolonged or repeated exposure. Highly flammable liquid and vapor.**Pictogram(s):****Precautionary Statement(s):** Prevention: Wash body thoroughly after handling. Wear protective gloves. Wear eye protection, face protection. Do not breathe dust, vapors. Do not eat, drink or smoke when using this product. Keep away from heat sources and open flame. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating, lighting and equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

Response: If on skin: Wash with plenty of water. Specific treatment (see first aid section on this label). If skin irritation or rash occurs: Get medical attention. Take off all contaminated clothing and wash it before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing If eye irritation persists: Get medical attention. If exposed or concerned: Call a doctor. Call a doctor if you feel unwell. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. In case of fire: Use water, dry chemical, CO2 or foam to extinguish.

Storage: Store locked up. Store in a well-ventilated place. Keep cool.

Disposal: Dispose of contents/container in accordance with local regulations.

Descriptions of Hazards not otherwise classified: N/A**Percent of mixture with unknown acute toxicity:** N/A**3. Composition and Information on Ingredients**

Chemical Name	Common Name	CAS #	Concentration %
Ethyl Alcohol	Ethanol	67-17-5	Trade Secret
Isopropyl Alcohol	Isopropanol	67-63-0	Trade Secret
Methyl Alcohol	Methanol	67-56-1	Trade Secret
Methyl Isobutyl Ketone	Hexone	108-10-1	Trade Secret
Water		7732-18-5	Trade Secret
Glacial Acetic Acid		64-19-7	Trade Secret



F.S. Eosin™

Eosin Y		17372-87-1	Trade Secret
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4. First Aid Measures

Eye Contact: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin Contact: If on skin (or hair): Take off immediately all contaminated clothing and wash before reuse. Wash with plenty of water. If skin irritation occurs: Get medical advice/attention.

Inhalation: Vapor Harmful. Remove to fresh air; give artificial respiration if breathing has stopped. Get medical advice/attention if you feel unwell.

Ingestion: Poison. May be fatal or cause blindness if swallowed. If exposed: Call a doctor. Cannot be made nonpoisonous. Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.

Symptoms: Irritation eyes, nose, throat; headache, dizziness, drowsiness, lassitude (weakness, exhaustion), narcosis; cough; liver damage; anemia; reproductive, teratogenic effects.

Recommendations for immediate medical care/special treatment: Get medical advice/attention if you feel unwell.

5. Fire- Fighting Measures

Extinguishing Media: Dry chemical, carbon dioxide, alcohol foam. Use water spray to cool fire-exposed containers and disperse vapors.

Fire Hazards (Chemical): OSHA classified Flammable Liquid. Vapors are flammable.

Special Protective Equipment: Fire fighters should use self-contained breathing apparatus and protective clothing.

Precautions for Firefighters: Carbon monoxide and unidentified organic compounds may be formed during combustion. Vapors can travel distances to ignition source and flash back. Cool fire exposed containers with water. Fine mist or spray may be flammable at temperatures below the flash point. When heated above the flash point this material emits flammable vapors which, when mixed with air, can burn or be explosive.

6. Accidental Release Measures

Emergency Procedures: Evacuate the area of all unnecessary personnel. Wear suitable protective equipment. Eliminate all sources of ignition and provide ventilation.

Protective Equipment: See section 8

Environmental Precautions: Prevent release to the environment by using barriers.

Containment and Clean-Up Procedures: Use barriers to prevent spreading. Collect spill in container. Call waste authorities.

7. Handling and Storage

Handling: Do not breathe vapors. Do not eat, drink or smoke when using this product. Keep away from heat, sparks, open flames, hot surfaces. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

Storage: Store locked up. Store in a well-ventilated place. Keep cool. Store away from sources of ignition, heat and open flame.

8. Exposure Controls/Personal Protection**OSHA Permissible Exposure Limits (PELs):**

Reagent	CAS #	OSHA PEL TWA
Ethyl Alcohol	64-17-5	1000ppm
Isopropyl Alcohol	67-63-0	400ppm
Methyl Alcohol	67-56-1	200ppm
Methyl Isobutyl Ketone	108-10-1	100ppm (410 mg/m3)
Glacial Acetic Acid	64-19-7	10ppm

ACGIH Threshold Limit Values (TLVs):

Reagent	CAS #	ACGIH PEL TLV	ACGIH STEL



F.S. Eosin™

Ethyl Alcohol	64-17-5	1000ppm	
Isopropyl Alcohol	67-63-0	400ppm (983 mg/m ³)	500ppm (1230 mg/m ³)
Methyl Alcohol	67-56-1	200ppm (262 mg/m ³)	250ppm (328 mg/m ³)
Methyl Isobutyl Ketone	108-10-1	50ppm	75ppm
Glacial Acetic Acid	64-19-7	10ppm	15ppm

Engineering Controls: Use in a well ventilated area to prevent exposure. Maintain eyewash fountain and quick-drench facilities in work areas.

Personal Protective Measures: Wear gloves, lab coat, eye protection and impervious footwear. Contact lenses should not be worn when working with this material.

Special PPE Requirements: If ventilation hood not available wear respirator.

9. Physical and Chemical Properties Section

Appearance: Bright orange/red, Bright orange/red liquid

Molecular Weight: N/A

Molecular Formula: N/A

pH: N/A

Boiling Point and Boiling Range: N/A

Melting Point/Freezing Point: N/A

Flash Point: N/A

Specific Gravity/Relative Density: N/A

Odor: Characteristic alcohol odor

Odor Threshold: N/A

Color: Bright orange/red

Flammability (solid/gas): Emits flammable vapors, flammable liquid

Vapor Density: N/A

Upper/Lower flammability or explosive limits: N/A

Vapor Pressure: N/A

Evaporation Rate: N/A

Partition Coefficient: n-octanol/water: N/A

Viscosity: N/A

Auto-ignition temperature: N/A

Solubility: Miscible in water

Decomposition Temperature: N/A

10. Stability and Reactivity

Reactivity:

Chemical Stability: Stable

Conditions of Stability/Instability: Instable under heat

Stabilizers needed: None

Safety issue indicated by appearance change: N/A

Other: N/A

Hazardous Reactions: N/A

Hazardous Polymerization: Does not occur

Conditions to avoid: Heat, open flame.

Classes of Incompatible Materials: Strong oxidizers, potassium dioxide, bromine pentafluoride, acetyl bromide, acetyl chloride, platinum, sodium

Hazardous Decomposition Products: Thermal-oxidation degradation can produce oxides of carbon. Toxic gases and vapors (I.e. Carbon monoxide) may be released in a fire.

**11. Toxicological Information****Likely Routes of Exposure****Eyes:** Irritation.**Skin:** Irritation.**Inhalation:** Dizziness, headache, nausea, narcosis**Ingestion:** May cause blindness, nausea, damage to gastrointestinal tract, liver, kidneys and cardiovascular system. Carcinogenic if ingested repeatedly over time (IARC List 1-Ethanol in alcoholic beverages)**Signs or Symptoms of Exposure:** Irritation eyes, skin, nose; headache, drowsiness, lassitude (weakness, exhaustion), narcosis; cough; liver damage; anemia; reproductive, teratogenic effects**Effects from short term exposure (delayed, immediate, chronic):** May cause blindness, nausea, damage to gastrointestinal tract, liver, kidneys and cardiovascular system**Acute Toxicity (Numerical Measures):** Ethanol: LD50 (oral, mouse) = 3450 mg/kg, LC50 (inhalation, mouse) = 39000 mg/m³/4H**Carcinogenicity (NTP, IARC, OSHA):** Not listed as a carcinogen.* *Note: Ethanol in alcoholic beverages is listed as IARC List 1 Carcinogenic to humans.**12. Ecological Information****Ecotoxicity:** N/A**Persistence and degradability:** N/A**Bioaccumulation Potential (octanol-water partition coefficient, BCF):** N/A**Mobility in the soil:** N/A**Adverse Environmental Effects:** N/A**13. Disposal Considerations****Recommended Disposal Containers:** Check with your local waste authorities***Recommended Disposal Methods:** Do not dispose of in drains, check with your local waste authorities.***Physical/Chemical Properties affecting Disposal:** See section 2 and section 9 applicable information.***Special Precautions for Landfill and Incineration Activities:** Check with your local waste authorities.***Waste Stream:** Consult your local or regional authorities.***14. Transport Information****UN Number:** UN1170**UN Proper Shipping Name:** Ethanol**Transport Hazard Class(es):** 3**Packing Group Number:** II**Environmental Hazards (IMDG code):****Marine Pollutant:** No**Transport in Bulk (IBC Code):** N/A**Special Transport Precautions:** N/A**15. Regulatory Information****OSHA:****DOT:****EPA:****CPSC:**



Safety Data Sheet

F.S. EosinTM

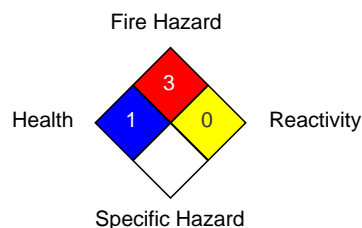
16. Other Information

Revision Date: 12/05/2014

NFPA

Health	1
Fire Hazard	3
Reactivity	0
Specific Hazard	

National Fire Protection Association (USA) NFPA



HMIS

Health	1
Flammability	3
Physical Hazard	0
Personal Protection	

Hazardous Material Information System HMIS

Health	1
Flammability	3
Physical Hazard	0
Personal Protection	

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Safety Data Sheet

F.S. Acid Alcohol™

1. Identification

Product Name: F.S. Acid Alcohol™**Item #:** 6519, 6520, 6521**Web SDS:** S123**Synonyms:** N/A**Recommended Use:** N/A**Restrictions on Use:** Not a beverage.**Manufacturer:**BBC Biochemical
409 Eleanor Lane,
Mount Vernon, WA 98273
1-800-635-4477**In Case of Emergency:**Chemtec US 1-800-424-9300
Chemtec International 703-527-3887

2. Hazards Identification

OSHA Hazard Classification(s):Skin Irritation - Category 2
Eye Irritation - Category 2A
Specific Target Organ Toxicity (single exposure) - Category 1
Specific Target Organ Toxicity (repeated exposure) - Category 2
Flammable Liquids - Category 2**Signal Word:** Danger**Hazard Statement(s):** Causes skin irritation. Causes serious eye irritation. Causes damage to organs (respiratory system). May cause damage to organs (respiratory system, central nervous system, liver, blood) through prolonged or repeated exposure. Highly flammable liquid and vapor.**Pictogram(s):****Precautionary Statement(s):** Prevention: Wash body thoroughly after handling. Wear protective gloves. Wear eye protection, face protection. Do not breathe dust, vapors. Do not eat, drink or smoke when using this product. Keep away from heat sources and open flame. No smoking. Keep container tightly closed. Ground/bond container and receiving equipment. Use explosion-proof electrical, ventilating, lighting and equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

Response: If on skin: Wash with plenty of water. Specific treatment (see first aid section on this label). If skin irritation or rash occurs: Get medical attention. Take off all contaminated clothing and wash it before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing If eye irritation persists: Get medical attention. If exposed or concerned: Call a doctor. Call a doctor if you feel unwell. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. In case of fire: Use water, dry chemical, CO2 or foam to extinguish.

Storage: Store locked up. Store in a well-ventilated place. Keep cool.

Disposal: Dispose of contents/container in accordance with local regulations.

Descriptions of Hazards not otherwise classified: N/A**Percent of mixture with unknown acute toxicity:** N/A

3. Composition and Information on Ingredients

Chemical Name	Common Name	CAS #	Concentration %
Water		7732-18-5	Trade Secret
Etanol, Denatured		64-17-5	Trade Secret
Methyl Alcohol		67-56-1	Trade Secret
Isopropyl Alcohol		67-63-0	Trade Secret
Hydrochloric Acid (conc)		7647-01-0	Trade Secret



Safety Data Sheet

F.S. Acid Alcohol™

4. First Aid Measures

Eye Contact: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin Contact: If on skin (or hair): Take off immediately all contaminated clothing and wash before reuse. Wash with plenty of water. If skin irritation occurs: Get medical advice/attention.

Inhalation: Vapor harmful. Remove to fresh air; give artificial respiration if breathing has stopped. Get medical advice/attention if you feel unwell.

Ingestion: Poison. May be fatal or cause blindness if swallowed. Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.

Symptoms: Irritation eyes, nose, throat; headache, dizziness, drowsiness, lassitude (weakness, exhaustion), narcosis; cough; liver damage; anemia; reproductive, teratogenic effects.

Recommendations for immediate medical care/special treatment: Get medical advice/attention if you feel unwell.

5. Fire- Fighting Measures

Extinguishing Media: Dry chemical, carbon dioxide, alcohol foam, water. Use water spray to cool fire-exposed containers and disperse vapors.

Fire Hazards (Chemical): OSHA classified Flammable Liquid Category 2

Special Protective Equipment: Fire fighters should use self-contained breathing apparatus and protective clothing.

Precautions for Firefighters: Carbon monoxide and unidentified organic compounds may be formed during combustion. Vapors can travel distances to ignition source and flash back. Cool fire exposed containers with water. Fine mist or spray may be flammable at temperatures below the flash point. When heated above the flash point this material emits flammable vapors which, when mixed with air, can burn or be explosive.

6. Accidental Release Measures

Emergency Procedures: Evacuate the area of all unnecessary personnel. Wear suitable protective equipment. Eliminate all sources of ignition and provide ventilation.

Protective Equipment: See section 8

Environmental Precautions: Prevent release to the environment by using barriers.

Containment and Clean-Up Procedures: Use barriers to prevent spreading. Collect spill in container. Call waste authorities.

7. Handling and Storage

Handling: Do not breathe vapors. Do not eat, drink or smoke when using this product. Keep away from heat, sparks, open flames, hot surfaces. Keep container tightly closed. Ground/Bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.

Storage: Store locked up. Store in a well-ventilated place. Keep cool. Store away from sources of ignition, heat and open flame.

8. Exposure Controls/Personal Protection

OSHA Permissible Exposure Limits (PELs):

Reagent	CAS #	OSHA PEL TWA
Ethyl Alcohol	64-17-5	1000ppm
Methyl Alcohol	67-56-1	200ppm
Isopropyl Alcohol	67-63-0	400ppm
Hydrochloric Acid (conc)	7647-01-0	5ppm

ACGIH Threshold Limit Values (TLVs):

Reagent	CAS #	ACGIH PEL TLV	ACGIH STEL
Ethyl Alcohol	64-17-5	1000ppm	1000ppm
Methyl Alcohol	67-56-1	200ppm	250ppm
Isopropyl Alcohol	67-63-0	200ppm	400ppm



Safety Data Sheet

F.S. Acid Alcohol™

Hydrochloric Acid (conc)	7647-01-0	2ppm	
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Engineering Controls: Use in a well ventilated area to prevent exposure. Maintain eyewash fountain and quick-drench facilities in work areas.

Personal Protective Measures: Wear gloves, lab coat, eye protection and impervious footwear. Contact lenses should not be worn when working with this material.

Special PPE Requirements: If ventilation hood not available wear respirator.

9. Physical and Chemical Properties Section

Appearance: Colorless, Liquid

Molecular Weight: N/A

Molecular Formula: N/A

pH: N/A

Boiling Point and Boiling Range: N/A

Melting Point/Freezing Point: N/A

Flash Point: N/A

Specific Gravity/Relative Density: N/A

Odor: Vinous odor

Odor Threshold: N/A

Color: Colorless

Flammability (solid/gas): Flammable liquid, emits flammable vapors

Vapor Density: N/A

Upper/Lower flammability or explosive limits: N/A

Vapor Pressure: N/A

Evaporation Rate: N/A

Partition Coefficient: n-octanol/water: N/A

Viscosity: N/A

Auto-ignition temperature: N/A

Solubility: Miscible in water.

Decomposition Temperature: N/A

10. Stability and Reactivity

Reactivity:

Chemical Stability: Stable

Conditions of Stability/Instability: Instable under conditions of heat or exposure to open flame/sparks.

Stabilizers needed: None

Safety issue indicated by appearance change: N/A

Other: N/A

Hazardous Reactions: N/A

Hazardous Polymerization: Does not occur

Conditions to avoid: Heat, open flame, sparks.

Classes of Incompatible Materials: Strong oxidizers, Potassium dioxide, bromine pentafluoride, acetyl bromide, acetyl chloride, platinum, sodium.

Hazardous Decomposition Products: Thermal-oxidation degradation can produce oxides of carbon. Toxic gases and vapors (I.e. Carbon monoxide) may be released in a fire.

11. Toxicological Information

Likely Routes of Exposure

Eyes: Irritation.



Safety Data Sheet

F.S. Acid Alcohol™

Skin: Irritation.

Inhalation: Dizziness, headaches, nausea, narcosis.

Ingestion: Nausea. May cause blindness, damage to gastrointestinal tract, liver, kidneys and cardiovascular system. Carcinogenic if ingested repeatedly over time (IARC List 1-Ethanol in alcoholic beverages)

Signs or Symptoms of Exposure: Irritation eyes, skin, nose; headache, drowsiness, lassitude (weakness, exhaustion), narcosis; cough; liver damage; anemia; reproductive, teratogenic effects.

Effects from short term exposure (delayed, immediate, chronic): May cause blindness, nausea, damage to gastrointestinal tract, liver, kidneys and cardiovascular system

Acute Toxicity (Numerical Measures): Ethyl Alcohol: LD50 (oral, mouse)= 3450 mg/kg, LC50(inhalation, mouse)=39000 mg/m³/4H;

Hydrochloric Acid: LD50(oral, rat)=900 mg/kg; LC50(inhalation, mouse)=1108 ppm/1H; LC50(inhalation, mouse)=3940 mg/m³/30M

Carcinogenicity (NTP, IARC, OSHA): Ethanol in alcoholic beverages is listed as IARC List 1 Carcinogenic to humans.

12. Ecological Information

Ecotoxicity: Ecotoxicity: CAS 7647-01-0 Hydrochloric Acid Fish: LC50 (96 Hr) Mosquito Fish: 282 mg/L LC100(24Hr) Trout: 10 mg/L Invertebrates: LC50(48Hr) Starfish: 100-330 mg/L LC50 (48Hr) Shrimp: 100-330 mg/L

Persistence and degradability: N/A

Bioaccumulation Potential (octanol-water partition coefficient, BCF): N/A

Mobility in the soil: N/A

Adverse Environmental Effects: N/A

13. Disposal Considerations

Recommended Disposal Containers: Check with your local waste authorities*

Recommended Disposal Methods: Do not dispose of in drains, check with your local waste authorities.*

Physical/Chemical Properties affecting Disposal: See section 2 and section 9 applicable information.*

Special Precautions for Landfill and Incineration Activities: Check with your local waste authorities.*

Waste Stream: Consult your local or regional authorities.*

14. Transport Information

UN Number: UN1170

UN Proper Shipping Name: Flammable Liquids, Corrosive, n.o.s., (Ethanol Solutions)

Transport Hazard Class(es): 3

Packing Group Number: II

Environmental Hazards (IMDG code):

Marine Pollutant:

Transport in Bulk (IBC Code):

Special Transport Precautions:

15. Regulatory Information

OSHA:

DOT:

EPA:

CPSC:



Safety Data Sheet

F.S. Acid Alcohol™

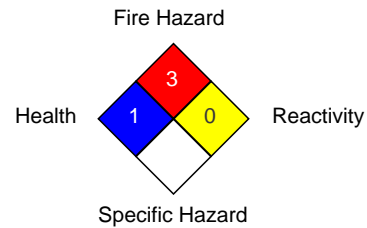
16. Other Information

Revision Date: 12/05/2014

NFPA

Health	1
Fire Hazard	3
Reactivity	0
Specific Hazard	

National Fire Protection Association (USA) NFPA



HMIS

Health	1
Flammability	3
Physical Hazard	0
Personal Protection	

Hazardous Material Information System HMIS

Health	1
Flammability	3
Physical Hazard	0
Personal Protection	

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Safety Data Sheet

F.S. Hematoxylin™

1. Identification

Product Name: F.S. Hematoxylin™

Item #: 6509, 6510, 6511

Web SDS: S122

Synonyms: Hematoxylin Stain Solution

Recommended Use: N/A

Restrictions on Use: N/A

Manufacturer:

BBC Biochemical
409 Eleanor Lane,
Mount Vernon, WA 98273
1-800-635-4477

In Case of Emergency:

Chemtec US 1-800-424-9300
Chemtec International 703-527-3887

2. Hazards Identification

OSHA Hazard Classification(s):

Skin Irritation - Category 2
Eye Irritation - Category 2A
Specific Target Organ Toxicity (repeated exposure) - Category 2
Toxic to Reproduction - Category 2

Signal Word: Warning

Hazard Statement(s): Causes skin irritation. Causes serious eye irritation. May cause damage to organs (kidneys) through prolonged or repeated exposure. Suspected of damaging fertility of the unborn child.

Pictogram(s):



Precautionary Statement(s): Prevention: Wash body thoroughly after handling. Wear protective gloves. Wear eye protection, face protection. Do not breathe dust, vapors. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing, eye protection and face protection.

Response: If on skin: Wash with plenty of water. Specific treatment (see first aid section on this label). If skin irritation or rash occurs: Get medical attention. Take off all contaminated clothing and wash it before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing If eye irritation persists: Get medical attention. Call a doctor if you feel unwell. If exposed or concerned: Get medical attention.

Storage: Store locked up.

Disposal: Dispose of contents/container in accordance with local regulations.

Descriptions of Hazards not otherwise classified: N/A

Percent of mixture with unknown acute toxicity: N/A

3. Composition and Information on Ingredients

Chemical Name	Common Name	CAS #	Concentration %
Water		7732-18-5	Trade Secret
Hematoxylin		517-28-2	Trade Secret
Aluminum Ammonium Sulfate		7784-26-1	Trade Secret
Ethylene Glycol		107-21-1	Trade Secret
Glacial Acetic Acid		64-19-7	Trade Secret
Dimethyl Sulfoxide	DMSO	67-68-5	Trade Secret
Propylene Glycol	1,2 Propanediol	57-55-6	Trade Secret
Aluminum Sulfate		10043-01-3	Trade Secret
Select Buffer		Trade Secret	Trade Secret



Safety Data Sheet

F.S. Hematoxylin™

4. First Aid Measures

Eye Contact: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin Contact: If on skin (or hair): Take off immediately all contaminated clothing and wash before reuse. Wash with plenty of water. If skin irritation occurs: Get medical advice/attention.

Inhalation: Remove to fresh air; give artificial respiration if breathing has stopped. Get medical advice/attention if you feel unwell.

Ingestion: Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.

Symptoms: Irritation eyes, nose, throat; headache, dizziness

Recommendations for immediate medical care/special treatment: Get medical advice/attention if you feel unwell.

5. Fire- Fighting Measures

Extinguishing Media: Dry chemical, carbon dioxide, alcohol foam, water.

Fire Hazards (Chemical): Not flammable.

Special Protective Equipment: Fire fighters should use self-contained breathing apparatus and protective clothing.

Precautions for Firefighters: Carbon monoxide and unidentified organic compounds may be formed during combustion.

6. Accidental Release Measures

Emergency Procedures: Evacuate the area of all unnecessary personnel. Wear suitable protective equipment. Eliminate all sources of ignition and provide ventilation.

Protective Equipment: See section 8

Environmental Precautions: Prevent release to the environment by using barriers.

Containment and Clean-Up Procedures: Use barriers to prevent spreading. Collect spill in container. Call waste authorities.

7. Handling and Storage

Handling: Do not breathe vapors. Do not eat, drink or smoke when using this product.

Storage: Store locked up. Keep container tightly closed. Store away from heat, sparks, open flame. Store in a cool, well-ventilated place.

8. Exposure Controls/Personal Protection

OSHA Permissible Exposure Limits (PELs):

Reagent	CAS #	OSHA PEL TWA
Glacial Acetic Acid	64-19-7	10 ppm, 25 mg/m3

ACGIH Threshold Limit Values (TLVs):

Reagent	CAS #	ACGIH PEL TLV	ACGIH STEL
Glacial Acetic Acid	64-19-7	10 ppm, 25 mg/m3	15 ppm, 37 mg/m3

Engineering Controls: Use in a well ventilated area to prevent exposure. Maintain eyewash fountain and quick-drench facilities in work areas.

Personal Protective Measures: Wear gloves, lab coat, eye protection and impervious footwear. Contact lenses should not be worn when working with this material.

Special PPE Requirements: If ventilation hood not available wear respirator.

9. Physical and Chemical Properties Section

Appearance: Dark Purple, Liquid

Molecular Weight: N/A

Molecular Formula: N/A

**F.S. Hematoxylin™**

pH: 2.6
Boiling Point and Boiling Range: N/A
Melting Point/Freezing Point: N/A
Flash Point: N/A
Specific Gravity/Relative Density: N/A
Odor: N/A
Odor Threshold: N/A
Color: Dark Purple
Flammability (solid/gas): N/A
Vapor Density: N/A
Upper/Lower flammability or explosive limits: N/A
Vapor Pressure: N/A
Evaporation Rate: N/A
Partition Coefficient: n-octanol/water: N/A
Viscosity: N/A
Auto-ignition temperature: N/A
Solubility: N/A
Decomposition Temperature: N/A

10. Stability and Reactivity

Reactivity:
Chemical Stability: Stable
Conditions of Stability/Instability: N/A
Stabilizers needed: None
Safety issue indicated by appearance change: N/A
Other: N/A
Hazardous Reactions: N/A
Hazardous Polymerization: Does not occur
Conditions to avoid: N/A
Classes of Incompatible Materials: Oxidizers, Strong Acids, Strong Bases
Hazardous Decomposition Products: Thermal-oxidation degradation can produce oxides of carbon. Toxic gases and vapors (I.e. Carbon monoxide) may be released in a fire.

11. Toxicological Information**Likely Routes of Exposure**

Eyes: Irritation.
Skin: Irritation.
Inhalation: Dizziness, headache.
Ingestion: Nausea.

Signs or Symptoms of Exposure: Nausea.

Effects from short term exposure (delayed, immediate, chronic): Irritation to the eyes, nose, throat; headache, dizziness, nausea.

Acute Toxicity (Numerical Measures): Glacial Acetic Acid: LD50 (mammal, skin)=1060mg/kg; LD50 (rabbit, skin)=1060 mg/kg; LC50(inhalation, mouse)=5620 ppm/1H; LC50(inhalation, mouse)=5620 mg/m³/1H

Ethylene Glycol: LD50(oral, cat)=1650 mg/kg, LD50 (oral, cat)=2000 mg/kg

Carcinogenicity (NTP, IARC, OSHA): No reagents listed as carcinogens.

12. Ecological Information



Safety Data Sheet

F.S. Hematoxylin™

Ecotoxicity: Acute Aquatic Effects Data for 100% Glacial Acetic Acid 96 h LC-50 (fathead minnow): > 100mg/L 48 h LC-50 (golden orfe): 410 mg/L 48 h LC-50 (mosquito fish): 251 mg/L 96 h LC-50 (daphnid): > 100 mg/L

Persistence and degradability: No long term effects known.

Bioaccumulation Potential (octanol-water partition coefficient, BCF): Oxygen Demand Data for 100% Glacial Acetic Acid BOD-5: 340-880 mg/g BOD-20: 900 mg/g COD: 1,030 mg/g

Mobility in the soil: N/A

Adverse Environmental Effects: N/A

13. Disposal Considerations

Recommended Disposal Containers: Check with your local waste authorities*

Recommended Disposal Methods: Do not dispose of in drains, check with your local waste authorities.*

Physical/Chemical Properties affecting Disposal: See section 2 and section 9 applicable information.*

Special Precautions for Landfill and Incineration Activities: Check with your local waste authorities.*

Waste Stream: Consult your local or regional authorities.*

14. Transport Information

UN Number: Not regulated.

UN Proper Shipping Name:

Transport Hazard Class(es):

Packing Group Number:

Environmental Hazards (IMDG code):

Marine Pollutant:

Transport in Bulk (IBC Code):

Special Transport Precautions:

15. Regulatory Information

OSHA:

DOT:

EPA:

CPSC:



Safety Data Sheet

F.S. Hematoxylin[™]

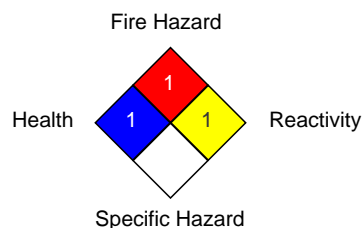
16. Other Information

Revision Date: 12/05/2014

NFPA

Health	1
Fire Hazard	1
Reactivity	1
Specific Hazard	

National Fire Protection Association (USA) NFPA



HMIS

Health	1
Flammability	1
Physical Hazard	1
Personal Protection	

Hazardous Material Information System HMIS

Health	1
Flammability	1
Physical Hazard	1
Personal Protection	

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Safety Data Sheet

F.S. Blueing Solution[™]

1. Identification

Product Name: F.S. Blueing Solution[™]

Item #: 6529, 6530, 6531

Web SDS: S121

Synonyms: Frozen Section Blueing Solution

Recommended Use: N/A

Restrictions on Use: N/A

Manufacturer:

In Case of Emergency:

BBC Biochemical
409 Eleanor Lane,
Mount Vernon, WA 98273
1-800-635-4477

Chemtec US 1-800-424-9300
Chemtec International 703-527-3887

2. Hazards Identification

OSHA Hazard Classification(s):

Toxic to Reproduction - Category 2

Skin Irritation - Category 2

Eye Irritation - Category 2B

Signal Word: Warning

Hazard Statement(s): Suspected of damaging fertility of the unborn child. Causes skin irritation. Causes eye irritation.

Pictogram(s):



Precautionary Statement(s): Prevention: Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves, protective clothing, eye protection and face protection. Wash body thoroughly after handling. Wear protective gloves.

Response: If exposed or concerned: Get medical attention. If on skin: Wash with plenty of water. Specific treatment (see first aid section on this label). If skin irritation or rash occurs: Get medical attention. Take off all contaminated clothing and wash it before reuse. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing If eye irritation persists: Get medical attention.

Storage: Store locked up.

Disposal: Dispose of contents/container in accordance with local regulations.

Descriptions of Hazards not otherwise classified: N/A

Percent of mixture with unknown acute toxicity: N/A

3. Composition and Information on Ingredients

Chemical Name	Common Name	CAS #	Concentration %
Water		7732-18-5	Trade Secret
Lithium Carbonate		554-13-2	
Select Preservative		Trade Secret	Trade Secret

4. First Aid Measures

Eye Contact: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin Contact: If on skin (or hair): Take off immediately all contaminated clothing and wash before reuse. Wash with plenty of water. If skin irritation occurs: Get medical advice/attention.

Inhalation: Remove to fresh air; give artificial respiration if breathing has stopped. Get medical advice/attention if you feel unwell.

Ingestion: Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.

**F.S. Blueing Solution™**

Symptoms: Irritation eyes, nose, throat; headache, dizziness

Recommendations for immediate medical care/special treatment: Get medical advice/attention if you feel unwell.

5. Fire- Fighting Measures

Extinguishing Media: Dry chemical, carbon dioxide, alcohol foam, water.

Fire Hazards (Chemical): Not flammable.

Special Protective Equipment: Fire fighters should use self-contained breathing apparatus and protective clothing.

Precautions for Firefighters: Fire fighters should use self-contained breathing apparatus and protective clothing.

6. Accidental Release Measures

Emergency Procedures: Evacuate the area of all unnecessary personnel. Wear suitable protective equipment. Eliminate all sources of ignition and provide ventilation.

Protective Equipment: See section 8

Environmental Precautions: Prevent release to the environment by using barriers.

Containment and Clean-Up Procedures: Use barriers to prevent spreading. Collect spill in container. Call waste authorities.

7. Handling and Storage

Handling: Do not breathe vapors. Do not eat, drink or smoke when using this product.

Storage: Store locked up. Store in a well-ventilated, cool place. Keep lid tightly closed.

8. Exposure Controls/Personal Protection

OSHA Permissible Exposure Limits (PELs):

Reagent	CAS #	OSHA PEL TWA
N/A		

ACGIH Threshold Limit Values (TLVs):

Reagent	CAS #	ACGIH PEL TLV	ACGIH STEL
N/A			

Engineering Controls: Use in a well ventilated area to prevent exposure. Maintain eyewash fountain and quick-drench facilities in work areas.

Personal Protective Measures: Wear gloves, lab coat, eye protection and impervious footwear. Contact lenses should not be worn when working with this material.

Special PPE Requirements: If ventilation hood not available wear respirator.

9. Physical and Chemical Properties Section

Appearance: Colorless, Liquid

Molecular Weight: N/A

Molecular Formula: N/A

pH: 10.9-11.1

Boiling Point and Boiling Range: 100°C

Melting Point/Freezing Point: N/A

Flash Point: N/A

Specific Gravity/Relative Density: N/A

Odor: N/A

Odor Threshold: N/A

Color: Colorless

Flammability (solid/gas): N/A

**F.S. Blueing Solution™**

Vapor Density: N/A
Upper/Lower flammability or explosive limits: N/A
Vapor Pressure: N/A
Evaporation Rate: N/A
Partition Coefficient: n-octanol/water: N/A
Viscosity: N/A
Auto-ignition temperature: N/A
Solubility: Miscible in water.
Decomposition Temperature: N/A

10. Stability and Reactivity

Reactivity: N/A
Chemical Stability: Stable
Conditions of Stability/Instability: N/A
Stabilizers needed: None
Safety issue indicated by appearance change: N/A
Other: N/A
Hazardous Reactions: N/A
Hazardous Polymerization: Does not occur
Conditions to avoid: N/A
Classes of Incompatible Materials: Oxidizers, Strong Acids, Strong Bases
Hazardous Decomposition Products: Thermal-oxidation degradation can produce oxides of carbon. Toxic gases and vapors (I.e. Carbon monoxide) may be released in a fire.

11. Toxicological Information**Likely Routes of Exposure**

Eyes: Irritation. May cause temporary corneal damage. Very basic solution.
Skin: Irritation. May cause skin damage or redness. Very basic solution.
Inhalation: Dizziness, headache.
Ingestion: Nausea. May cause irritation to mouth, throat, stomach and gastrointestinal tract.

Signs or Symptoms of Exposure: Nausea. Irritation, headaches.

Effects from short term exposure (delayed, immediate, chronic): Irritation to the eyes, nose, throat; headache, dizziness, nausea.

Acute Toxicity (Numerical Measures): Lithium Carbonate: LD50(oral,rabbit)=404 mg/kg, LD50(oral,dog)=500 mg/kg

Carcinogenicity (NTP, IARC, OSHA): Not listed as a carcinogen.

12. Ecological Information

Ecotoxicity: Lithium Carbonate: Toxicity to fish: LC50-Oncorhynchus mykiss (rainbow trout)-30.3mg/l-96H Toxicity to daphnia and other aquatic invertebrates: EC50-Daphnia magna (Water flea)-33.2 mg/l-48H Toxicity to algae-static test EC50-Desmodesmus subspicatus (green algae)->400mg/l-72H

Persistence and degradability: N/A

Bioaccumulation Potential (octanol-water partition coefficient, BCF): N/A

Mobility in the soil: N/A

Adverse Environmental Effects: Harmful to aquatic life.

13. Disposal Considerations

Recommended Disposal Containers: Check with your local waste authorities*

Recommended Disposal Methods: Do not dispose of in drains, check with your local waste authorities.*

Physical/Chemical Properties affecting Disposal: See section 2 and section 9 applicable information.*



Safety Data Sheet

F.S. Blueing Solution™

Special Precautions for Landfill and Incineration Activities: Check with your local waste authorities.*

Waste Stream: Consult your local or regional authorities.*

14. Transport Information

UN Number:

UN Proper Shipping Name:

Transport Hazard Class(es):

Packing Group Number:

Environmental Hazards (IMDG code):

Marine Pollutant:

Transport in Bulk (IBC Code):

Special Transport Precautions:

15. Regulatory Information

OSHA:

DOT:

EPA:

CPSC:



Safety Data Sheet

F.S. Blueing Solution™

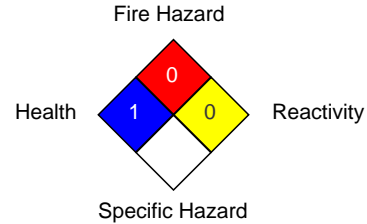
16. Other Information

Revision Date: 12/05/2014

NFPA

Health	1
Fire Hazard	0
Reactivity	0
Specific Hazard	

National Fire Protection Association (USA) NFPA



HMIS

Health	1
Flammability	0
Physical Hazard	0
Personal Protection	

Hazardous Material Information System HMIS

Health	1
Flammability	0
Physical Hazard	0
Personal Protection	

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