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**** MATERIAL SAFETY DATA SHEET ****

Safranin Stain
91223

**** SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION ****

MSDS Name: Safranin Stain

Catalog Numbers:

BP2711-1G, BP2711-250, BP2711-4, BP2711-500, 23255963, 23270183, 23281407D,
23291476, 66762, 66762S, 66770B, 66780B, 66782

Synonyms:

Mixture

Company Identification: Fisher Diagnostics
Fisher Scientific Company LLC
8365 Valley Pike
Middletown, VA 22645-0307

For information, call: 800-528-0494

Emergency Number: 800-524-0294

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

**** SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS ****

CAS#	Chemical Name	%	EINECS#
64-17-5	Ethyl alcohol	19	200-578-6
67-56-1	Methyl alcohol	1	200-659-6
477-73-6	Safranin	0.604	207-518-6
7732-18-5	Water	<80	231-791-2

Hazard Symbols: None Listed.

Risk Phrases: None Listed.

**** SECTION 3 - HAZARDS IDENTIFICATION ****

EMERGENCY OVERVIEW

Appearance: red liquid. Flash Point: 82 deg F.

Warning: Causes eye irritation. May cause central nervous system depression. May be absorbed through intact skin. May cause blindness if swallowed. May cause liver and kidney damage. Flammable liquid and vapor. May cause skin and respiratory tract irritation.

Target Organs: Central nervous system, liver, eyes.

Potential Health Effects

Eye:

Produces irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury. Vapors may cause eye irritation. May cause painful sensitization to light.

Skin:

May cause skin irritation. May be absorbed through the skin in harmful amounts.

Ingestion:

May cause systemic toxicity with acidosis. May cause liver and kidney damage. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. May cause blindness if swallowed.

Inhalation:

May cause respiratory tract irritation. May cause liver and kidney damage. May cause narcotic effects in high concentration. May cause drowsiness, unconsciousness, and central nervous system depression.

Chronic:

Prolonged or repeated skin contact may cause dermatitis. Chronic inhalation may cause effects similar to those of acute inhalation.

**** SECTION 4 - FIRST AID MEASURES ****

Eyes:

Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

Skin:

Get medical aid. Rinse area with large amounts of water for at least 15 minutes.

Ingestion:

Call a poison control center. If swallowed, do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation:

Get medical aid immediately. Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

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Notes to Physician:
Treat symptomatically and

**** SECTION 5 - FIRE FIGHTING MEASURES ****

General Information:

Containers can build up pressure if exposed to heat and/or fire. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Use water spray to keep fire-exposed containers cool. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas. Containers may explode when heated. Runoff from fire control or dilution water may cause pollution. Flammable liquid and vapor.

Extinguishing Media:

Use water spray to cool fire-exposed containers. Use water spray, dry chemical, carbon dioxide, or chemical foam. Do NOT use straight streams of water. Cool containers with flooding quantities of water until well after fire is out.

Autoignition Temperature: Not available.

Flash Point: 82 deg F (27.78 deg C)

Explosion Limits, lower: 3.3

Explosion Limits, upper: 19

NFPA Rating: (estimated) Health: 2; Flammability: 3; Instability: 0

**** SECTION 6 - ACCIDENTAL RELEASE MEASURES ****

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks:

Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Provide ventilation.

**** SECTION 7 - HANDLING and STORAGE ****

Handling:

Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Keep away from heat, sparks and flame. Avoid breathing vapor or mist.

Storage:

Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area.

**** SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION ****

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

Chemical Name	Exposure Limits		
	ACGIH	NIOSH	OSHA - Final PELs
Ethyl alcohol	1000 ppm	1000 ppm TWA; 1900 mg/m3 TWA 3300 ppm IDLH	1000 ppm TWA; 1900 mg/m3 TWA
Methyl alcohol	200 ppm; 250 ppm STEL; skin - potential for cutaneous absorption	200 ppm TWA; 260 mg/m3 TWA 6000 ppm IDLH	200 ppm TWA; 260 mg/m3 TWA
Safranin	none listed	none listed	none listed
Water	none listed	none listed	none listed

OSHA Vacated PELs:

Ethyl alcohol:
1000 ppm TWA; 1900 mg/m3 TWA

Methyl alcohol:
200 ppm TWA; 260 mg/m3 TWA

Safranin:

No OSHA Vacated PELs are listed for this chemical.

Water:

No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

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- Eyes: Wear chemical goggles.
Skin: Wear appropriate protective gloves to prevent skin exposure.
Clothing: Wear appropriate protective clothing to prevent skin exposure.
Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

**** SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES ****

Physical State: Liquid
Color: red
Odor: pungent odor
pH: Not available.
Vapor Pressure: 40 mm Hg @19 deg C
Vapor Density: 1.59 (air=1)
Evaporation Rate: Not available.
Viscosity: Not available.
Boiling Point: 95 deg C
Freezing/Melting Point: Not available.
Decomposition Temperature:
Solubility in water: Soluble.
Specific Gravity/Density: 1
Molecular Formula:
Molecular Weight:

**** SECTION 10 - STABILITY AND REACTIVITY ****

- Chemical Stability: Stable under normal temperatures and pressures.
Conditions to Avoid: Ignition sources, excess heat.
Incompatibilities with Other Materials: Ethanol is incompatible with acetic anhydride, acetyl bromide, ammonia + silver nitrate, disulfuric acid + nitric acid, dichloromethane + sulfuric acid, disulfuryl difluoride, magnesium perchlorate, nitric acid + silver, oxidants, phosphorus (III) oxide, platinum, potassium, potassium tert-butoxide, silver nitrate, silver oxide, sodium and tetrachlorosilane. Methanol is incompatible with acetyl bromide, alkylaluminum solutions, beryllium hydride, carbon tetrachloride + metals, chloroform + sodium, chloroform + sodium hydroxide, cyanuric chloride, dichloromethane, diethylzinc, metals, oxidants, phosphorus (III) oxide, and potassium tert-butoxide.
Hazardous Decomposition Products: Hydrogen chloride, carbon monoxide, oxides of nitrogen, carbon dioxide, formaldehyde.
Hazardous Polymerization: Will not occur.

**** SECTION 11 - TOXICOLOGICAL INFORMATION ****

- RTECS#:
CAS# 64-17-5: KQ6300000
CAS# 67-56-1: PC1400000
CAS# 477-73-6: SG1623000
CAS# 7732-18-5: ZC0110000
LD50/LC50:
CAS# 64-17-5: Draize test, rabbit, eye: 500 mg Severe; Draize test, rabbit, eye: 500 mg/24H Mild; Draize test, rabbit, skin: 20 mg/24H Moderate; Inhalation, mouse: LC50 = 39 gm/m³/4H; Inhalation, rat: LC50 = 20000 ppm/10H; Oral, mouse: LD50 = 3450 mg/kg; Oral, rabbit: LD50 = 6300 mg/kg; Oral, rat: LD50 = 9000 mg/kg; Oral, rat: LD50 = 7060 mg/kg.
CAS# 67-56-1: Draize test, rabbit, eye: 40 mg Moderate; Draize test, rabbit, eye: 100 mg/24H Moderate; Draize test, rabbit, skin: 20 mg/24H Moderate; Inhalation, rabbit: LC50 = 81000 mg/m³/14H; Inhalation, rat: LC50 = 64000 ppm/4H; Oral, mouse: LD50 = 7300 mg/kg; Oral, rabbit: LD50 = 14200 mg/kg; Oral, rat: LD50 = 5600 mg/kg; Skin, rabbit: LD50 = 15800 mg/kg.
CAS# 477-73-6
CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg.
Carcinogenicity:
Ethyl alcohol -
ACGIH: A4 - Not Classifiable as a Human Carcinogen
Methyl alcohol -
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Safranin -
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Water -
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.
Epidemiology:
This product contains methanol and ethanol which have been shown to produce fetotoxicity in the embryo or fetus. Specific abnormalities for methanol include the cardiovascular, musculoskeletal and urogenital

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- systems.
Teratogenicity: No information found.
Reproductive Effects: Methanol has been shown to produce reproductive effects in laboratory animals. Prenatal exposure to ethanol is associated with a distinct pattern of congenital malformations that have been collectively termed the "fetal alcohol syndrome". Among the characteristics of this syndrome are intrauterine and postnatal growth deficiency, a distinctive pattern of physical malformation, and behavioral/cognitive impairment such as fine motor dysfunction and mental retardation. Not all affected children have all of the features of the syndrome.
Neurotoxicity: No information found.
Mutagenicity: Methanol has been shown to produce DNA damage in laboratory animals.
Other Studies: See actual entry in RTECS for complete information.

**** SECTION 12 - ECOLOGICAL INFORMATION ****

**** SECTION 13 - DISPOSAL CONSIDERATIONS ****

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.
RCRA P-Series: None listed.
RCRA U-Series: CAS# 67-56-1: waste number U154 (Ignitable waste).

**** SECTION 14 - TRANSPORT INFORMATION ****

US DOT
Shipping Name: Flammable Liquid, N.O.S.
Hazard Class: 3
UN Number: UN1993
Packing Group: III
Canadian TDG
No information available.

**** SECTION 15 - REGULATORY INFORMATION ****

- US FEDERAL
TSCA
CAS# 64-17-5 is listed on the TSCA inventory.
CAS# 67-56-1 is listed on the TSCA inventory.
CAS# 477-73-6 is listed on the TSCA inventory.
CAS# 7732-18-5 is listed on the TSCA inventory.
Health & Safety Reporting List
None of the chemicals are on the Health & Safety Reporting List.
Chemical Test Rules
None of the chemicals in this product are under a Chemical Test Rule.
Section 12b
None of the chemicals are listed under TSCA Section 12b.
TSCA Significant New Use Rule
None of the chemicals in this material have a SNUR under TSCA.
SARA
CERCLA Hazardous Substances and corresponding RQs
CAS# 67-56-1: 5000 lb final RQ; 2270 kg final RQ
SARA Section 302 Extremely Hazardous Substances
None of the chemicals in this product have a TPQ.
SARA Codes
CAS # 64-17-5: acute, chronic, flammable.
CAS # 67-56-1: acute, flammable.
CAS # 477-73-6: acute, reactive.
Section 313
This chemical is not at a high enough concentration to be reportable under Section 313.
No chemicals are reportable under Section 313.
Clean Air Act:
CAS# 67-56-1 is listed as a hazardous air pollutant (HAP).
This material does not contain any Class 1 Ozone depleters.
This material does not contain any Class 2 Ozone depleters.
Clean Water Act:
None of the chemicals in this product are listed as Hazardous Substances under the CWA.
None of the chemicals in this product are listed as Priority Pollutants under the CWA.
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.
OSHA:
None of the chemicals in this product are considered highly hazardous by OSHA.

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STATE

Ethyl alcohol can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

Methyl alcohol can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

Safranin is not present on state lists from CA, PA, MN, MA, FL, or NJ.

Water is not present on state lists from CA, PA, MN, MA, FL, or NJ.
WARNING: This product contains Ethyl alcohol, a chemical known to the state of California to cause birth defects or other reproductive harm.

California No Significant Risk Level:

None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Not available.

Risk Phrases:

Safety Phrases:

WGK (Water Danger/Protection)

CAS# 64-17-5: 0

CAS# 67-56-1: 1

CAS# 477-73-6: No information available.

CAS# 7732-18-5: No information available.

United Kingdom Occupational Exposure Limits

CAS# 64-17-5: OES-United Kingdom, TWA 1000 ppm TWA; 1920 mg/m3 TWA

CAS# 67-56-1: OES-United Kingdom, TWA 200 ppm TWA; 266 mg/m3 TWA

CAS# 67-56-1: OES-United Kingdom, STEL 250 ppm STEL; 333 mg/m3 STEL

CAS# 67-56-1: OES-United Kingdom, STEL 250 ppm STEL; 333 mg/m3 STEL

United Kingdom Maximum Exposure Limits

Canada

CAS# 64-17-5 is listed on Canada's DSL List.

CAS# 67-56-1 is listed on Canada's DSL List.

CAS# 477-73-6 is listed on Canada's DSL List.

CAS# 7732-18-5 is listed on Canada's DSL List.

This product has a WHMIS classification of B2.

CAS# 64-17-5 is listed on Canada's Ingredient Disclosure List.

CAS# 67-56-1 is listed on Canada's Ingredient Disclosure List.

CAS# 477-73-6 is not listed on Canada's Ingredient Disclosure List.

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 64-17-5: OEL-AUSTRALIA:TWA 1000 ppm (1900 mg/m3)

OEL-BELGIUM:TWA 1000 ppm (1880 mg/m3)

OEL-CZECHOSLOVAKIA:TWA 1000 mg/m3;STEL 5000 mg/m3

OEL-DENMARK:TWA 1000 ppm (1900 mg/m3)

OEL-FINLAND:TWA 1000 ppm (1900 mg/m3);STEL 1250 ppm (2400 mg/m3)

OEL-FRANCE:TWA 1000 ppm (1900 mg/m3);STEL 5000 pp

OEL-GERMANY:TWA 1000 ppm (1900 mg/m3)

OEL-HUNGARY:TWA 1000 mg/m3;STEL 3000 mg/m3

OEL-THE NETHERLANDS:TWA 1000 ppm (1900 mg/m3)

OEL-THE PHILIPPINES:TWA 1000 ppm (1900 mg/m3)

OEL-POLAND:TWA 1000 mg/m3

OEL-RUSSIA:STEL 1000 mg/m3

OEL-SWEDEN:TWA 1000 ppm (1900 mg/m3)

OEL-SWITZERLAND:TWA 1000 ppm (1900 mg/m3)

OEL-THAILAND:TWA 1000 ppm (1900 mg/m3)

OEL-TURKEY:TWA 1000 ppm (1900 mg/m3)

OEL-UNITED KINGDOM:TWA 1000 ppm (1900 mg/m3) JAN9

OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV

OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

CAS# 67-56-1: OEL-ARAB Republic of Egypt:TWA 200 ppm (260 mg/m3);Skin

**** SECTION 16 - ADDITIONAL INFORMATION ****

MSDS Creation Date: 4/16/1999 Revision #9 Date: 7/23/2003

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company 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, howsoever arising, even if the company has been advised of the possibility of such damages.