MATERIAL SAFETY DATA SHEET

EM SCIENCE

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Manufacturer............: EM SCIENCE
A Division of EM Industries
P.O. Box 70
480 Democrat Road
Gibbstown, N.J. 08027

Preparation Date.: 10/6/97

Information Phone Number.: 856-423-6300
Hours: Mon. to Fri. 8:30-5
Chemtrec Emergency Number: 800-424-9300
Hours: 24 hrs a day

Catalog Number(s):
726X

Product Name:
Safranin Counter Stain
Synonyms:
N/A
Chemical Family:
Solution
Formula:
Solution
Molecular Weight.:
N/A

2. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>Appr %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Alcohol</td>
<td>64-17-5</td>
<td>0-10%</td>
</tr>
<tr>
<td>Safranin O</td>
<td>477-73-6</td>
<td>0-1%</td>
</tr>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>80-99%</td>
</tr>
</tbody>
</table>

Denatured ethyl alcohol contains methanol but its concentration for this product is less than 1%. Approx. % as wt/vol
3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
MAY BE HARMFUL IF INHALED, SWALLOWED OR ABSORBED THROUGH SKIN.
FLAMMABLE LIQUID AND VAPOR.

Appearance:
Red solution

POTENTIAL HEALTH EFFECTS (ACUTE AND CHRONIC)

Symptoms of Exposure:
May be harmful if inhaled, swallowed, or absorbed through the skin.

Medical Cond. Aggravated by Exposure:
No information found

Routes of Entry:
Inhalation, ingestion or skin contact

Carcinogenicity:
The material is not listed (IARC, NTP, OSHA) as cancer causing agent.

4. FIRST AID MEASURES

Emergency First Aid:
GET MEDICAL ASSISTANCE FOR ALL CASES OF OVEREXPOSURE.
Skin: Immediately flush thoroughly with large amounts of water.
Eyes: Immediately flush thoroughly with water for at least 15 minutes.
Inhalation: Remove to fresh air; give artificial respiration if breathing has stopped.
Ingestion: If conscious, drink water and induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flash Point (F): 97F
Flammable Limits LEL (%): N/A
Flammable Limits UEL (%): N/A
Extinguishing Media:
Use water, dry chemical, CO₂, or "alcohol" foam.

**Fire Fighting Procedures:**

Wear self-contained breathing apparatus and protective clothing.

**Fire & Explosion Hazards:**
Contains flammable component, ethyl alcohol.

### 6. ACCIDENTAL RELEASE MEASURES

**Spill Response:**
Evacuate the area of all unnecessary personnel. Wear suitable protective equipment listed under Exposure / Personal Protection. Eliminate any ignition sources until the area is determined to be free from explosion or fire hazards. Contain the release and eliminate its source, if this can be done without risk. Take up and containerize for proper disposal as described under Disposal. Comply with Federal, State, and local regulations on reporting releases. Refer to Regulatory Information for reportable quantity and other regulatory data.

EM SCIENCE recommends Spill–X absorbent agents for various types of spills. Additional information on the Spill–X products can be provided through the EM SCIENCE Technical Service Department (856) 423–6300. The following EM SCIENCE Spill–X absorbent is recommended for this product:

SX0863 Solvent Spill Treatment Kit

### 7. HANDLING AND STORAGE

**Handling & Storage:**
Keep container closed. Store at controlled room temperature. Do not breathe vapor. Do not get in eyes, on skin, or on clothing.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**ENGINEERING CONTROLS AND PERSONAL PROTECTIVE EQUIPMENT:**

**Ventilation, Respiratory Protection, Protective Clothing, Eye Protection:**
Material should be handled or transferred in an approved fume hood or with adequate ventilation. Protective gloves should be worn to prevent skin contact (Neoprene or equivalent) Safety glasses with side shields should be worn at all times.

**Work/Hygienic Practices:**
Wash thoroughly after handling. Do not take internally. Eye wash and safety equipment should be readily available.

**EXPOSURE GUIDELINES**

**OSHA – PEL:**

<table>
<thead>
<tr>
<th>TWA</th>
<th>STEL</th>
<th>CL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Component</td>
<td>PPM</td>
<td>MG/M3</td>
</tr>
<tr>
<td>-------------</td>
<td>-----</td>
<td>-------</td>
</tr>
<tr>
<td>Ethyl Alcohol</td>
<td>1000</td>
<td>1900</td>
</tr>
<tr>
<td>Safranin O</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
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</tbody>
</table>

**ACGIH – TLV:**

<table>
<thead>
<tr>
<th>Component</th>
<th>TWA</th>
<th>MG/M3</th>
<th>STEL</th>
<th>MG/M3</th>
<th>CL</th>
<th>MG/M3</th>
<th>Skin</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethyl Alcohol</td>
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<td>1880</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safranin O</td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water</td>
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</tbody>
</table>

If there are no exposure limit numbers listed in the Exposure Guidelines chart, this indicates that no OSHA or ACGIH exposure limits have been established.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

- **Boiling Point (C 760 mmHg):** N/A
- **Melting Point (C):** N/A
- **Specific Gravity (H_2O = 1):** N/A
- **Vapor Pressure (mm Hg):** N/A
- **Percent Volatile by vol (%):** N/A
- **Vapor Density (Air = 1):** N/A
- **Evaporation Rate (BuAc = 1):** N/A
- **Solubility in Water (%):** Soluble
- **Appearance:**
  - Red solution

**10. STABILITY AND REACTIVITY**

- **Stability:** Yes
- **Hazardous Polymerization:**
  - Does not occur
- **Hazardous Decomposition:**
  - None indicated
- **Conditions to Avoid:**
  - None indicated
Materials To Avoid:

( ) Water
( ) Acids
( ) Bases
( ) Corrosives
( ) Oxidizers
(X) Other: none indicated

11. TOXICOLOGICAL INFORMATION

Toxicity Data

None established

Toxicological Findings:
None
Cited in Registry of Toxic Effects of Chemical Substances (RTECS)

12. DISPOSAL CONSIDERATIONS

EPA Waste Numbers: D001

Treatment:
Incineration, fuels blending or recycle. Contact your local permitted waste disposal site (TSD) for permissible treatment sites.
ALWAYS CONTACT A PERMITTED WASTE DISPOSER (TSD) TO ASSURE COMPLIANCE WITH ALL CURRENT LOCAL, STATE AND FEDERAL REGULATIONS.

13. TRANSPORT INFORMATION

DOT Proper Shipping Name:
non-regulated (per 49CFR173.150(e))

DOT ID Number:
none(per 49CFR173.150(e))

14. REGULATORY INFORMATION

TSCA Statement:
This product is a "Mixture". The CAS numbers of all components are listed on the TSCA Inventory.
Ethyl Alcohol
Safranin O
Water

Ethyl Alcohol
Safranin O
Water

If there is no information listed on the regulatory information chart, this indicates that the chemical is not covered by the specific regulation listed.

15. OTHER INFORMATION

Comments:
None

NFPA Hazard Ratings:

Health : 1
Flammability : 2
Reactivity : 0
Special Hazards :

Revision History: 10/6/97

| = Revised Section
N/A = Not Available
N/E = None Established

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