Material Safety Data Sheet
Giemsa Stain Solution

Section 1 - Chemical Product and Company Identification

**MSDS Name:** Giemsa Stain

**Synonyms:** None

Section 2 - Composition, Information on Ingredients

<table>
<thead>
<tr>
<th>CAS#</th>
<th>Chemical Name</th>
<th>Percent</th>
<th>EINECS/ELINCS</th>
</tr>
</thead>
<tbody>
<tr>
<td>56-81-5</td>
<td>Glycerin</td>
<td>61.0</td>
<td>200-289-5</td>
</tr>
<tr>
<td>67-56-1</td>
<td>Methyl alcohol</td>
<td>38.3</td>
<td>200-659-6</td>
</tr>
<tr>
<td>53092-85-6</td>
<td>Azure II Eosin</td>
<td>0.6</td>
<td>unlisted</td>
</tr>
<tr>
<td>37247-10-2</td>
<td>Azure II</td>
<td>0.16</td>
<td>unlisted</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

May cause central nervous system depression. May cause liver and kidney damage. Cannot be made non-poisonous. This substance has caused adverse reproductive and fetal effects in animals.

**Target Organs:** Kidneys, central nervous system, liver, eyes.

**Potential Health Effects**

**Eye:** May cause painful sensitization to light. Vapors may cause eye irritation. May cause severe eye irritation and possible injury.

**Skin:** May cause skin irritation. May be absorbed through the skin.

**Ingestion:** May be fatal or cause blindness if swallowed. May cause irritation of the digestive tract. 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.

**Inhalation:** May cause respiratory tract irritation. May cause visual impairment and possible permanent blindness. May cause effects similar to those described for ingestion. May cause drowsiness, unconsciousness, and central nervous system depression.

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

Section 4 - First Aid Measures
**Eyes:** Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

**Skin:** Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

**Ingestion:** If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

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

**Notes to Physician:** Treat symptomatically and supportively.

**Section 5 - Fire Fighting Measures**

**General Information:** As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Use water spray to keep fire-exposed containers cool. Flammable liquid and vapor. May be ignited by heat, sparks, and flame. Vapors may form an explosive mixture with air. Containers may explode when heated.

**Extinguishing Media:** For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray. Cool containers with flooding quantities of water until well after fire is out.

**Autoignition Temperature:** Not available.

**Explosion Limits, Lower:** Not available.

**Upper:** Not available.

**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. A vapor suppressing foam may be used to reduce vapors. Water spray may reduce vapor but may not prevent ignition in closed spaces.

**Section 7 - Handling and Storage**

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Do not ingest or inhale. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

**Storage:** Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

**Section 8 - Exposure Controls, Personal Protection**
**Engineering Controls:** Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

**Personal Protective Equipment**

**Eyes:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**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. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

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**Section 9 - Physical and Chemical Properties**

**Physical State:** Liquid  
**Appearance:** not available  
**Odor:** Not available.  
**pH:** Not available.  
**Vapor Pressure:** Not available.  
**Vapor Density:** Not available.  
**Evaporation Rate:** Not available.  
**Viscosity:** Not available.  
**Boiling Point:** > 147 deg F  
**Freezing/Melting Point:** Not available.  
**Decomposition Temperature:** Not available.  
**Solubility:** Completely soluble in water.  
**Specific Gravity/Density:** Not available.  
**Molecular Formula:** Mixture  
**Molecular Weight:** Not available.

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**Section 10 - Stability and Reactivity**

**Chemical Stability:** Stable under normal temperatures and pressures.  
**Conditions to Avoid:** High temperatures, incompatible materials, ignition sources.  
**Incompatibilities with Other Materials:** Methanol is incompatible with oxidants (such as barium perchlorate, bromine, chlorine, hydrogen peroxide, lead perchlorate, perchloric acid, sodium hypochlorite). Active metals (such as potassium and magnesium). Substance is also incompatible with specific chemicals including: acetyl bromide, alkyl aluminum salts, beryllium dihydride, carbon tetrachloride + metals, chloroform + heat, chloroform + sodium hydroxide, cyanuric chloride, diethyl zinc, nitric acid, and potassium tertbutoxide. Please refer to the NFPA Fire Protection Guide for all specifics. Glycerol is incompatible with strong oxidizing agents and strong bases.  
**Hazardous Decomposition Products:** Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide, formaldehyde.  
**Hazardous Polymerization:** Has not been reported.

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**Section 11 - Toxicological Information**

**RTECS#:**  
**CAS# 56-81-5:** MA8050000
CAS# 67-56-1: PC1400000
CAS# 53092-85-6 unlisted.
CAS# 37247-10-2 unlisted.

LD50/LC50:
CAS# 56-81-5:
Draize test, rabbit, eye: 126 mg Mild;
Draize test, rabbit, eye: 500 mg/24H Mild;
Draize test, rabbit, skin: 500 mg/24H Mild;
Inhalation, rat: LC50 = >570 mg/m3/1H;
Oral, mouse: LD50 = 4090 mg/kg;
Oral, rabbit: LD50 = 27 gm/kg;
Oral, rat: LD50 = 12600 mg/kg;
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;<BR.

CAS# 53092-85-6:<BR.
CAS# 37247-10-2:<BR.

Carcinogenicity:

Section 12 - Ecological Information

Ecotoxicity: No data available. Cas# 56-81-5:LC50 (96 Hr.) rainbow trout = 50-67 mg/L; 12 degrees CLC50 (96 Hr.) goldfish = >5000 mg/L
Environmental: No information reported.
Physical: No information available.
Other: None.

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

<table>
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</thead>
<tbody>
<tr>
<td>Shipping Name:</td>
<td>Not regulated as a hazardous material</td>
</tr>
<tr>
<td>Hazard Class:</td>
<td></td>
</tr>
<tr>
<td>UN Number:</td>
<td></td>
</tr>
</tbody>
</table>
Section 15 - Regulatory Information

European/International Regulations
European Labeling in Accordance with EC Directives

Hazard Symbols:
T F

Risk Phrases:
R 11 Highly flammable.
R 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
R 39/23/24/25 Toxic : danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.

Safety Phrases:
S 16 Keep away from sources of ignition - No smoking.
S 2 Keep out of reach of children.
S 24 Avoid contact with skin.
S 7 Keep container tightly closed.

Section 16 - Additional Information

MSDS Creation Date: 7/20/1999
Revision #3 Date: 3/18/2005

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 event shall INDO GULF GROUP 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 INDO GULF GROUP has been advised of the possibility of such damages.