Material Safety Data Sheet
Carbol Fuchsin Solution

Section 1 - Chemical Product and Company Identification

**MSDS Name:** Carbol Fuchsin Solution  
**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>7732-18-5</td>
<td>Water</td>
<td>78.0-86.</td>
<td>231-791-2</td>
</tr>
<tr>
<td>64-17-5</td>
<td>Ethyl alcohol</td>
<td>7.2-11.4</td>
<td>200-578-6</td>
</tr>
<tr>
<td>108-95-2</td>
<td>Phenol</td>
<td>5.0-6.2</td>
<td>203-632-7</td>
</tr>
<tr>
<td>632-99-5</td>
<td>Basic fuchsin</td>
<td>0.5-3.1</td>
<td>211-189-6</td>
</tr>
<tr>
<td>67-56-1</td>
<td>Methyl alcohol</td>
<td>0.4-0.7</td>
<td>200-659-6</td>
</tr>
<tr>
<td>67-63-0</td>
<td>Isopropyl alcohol</td>
<td>0.4-0.7</td>
<td>200-661-7</td>
</tr>
</tbody>
</table>

Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

Appearance: not available liquid. Flash Point: 116 deg F.  
**Danger!** Causes eye burns. Causes digestive tract burns. Corrosive. Flammable liquid and vapor. May be absorbed through intact skin. Causes severe respiratory tract irritation. May cause central nervous system depression. May form explosive peroxides. Causes skin burns. May cause liver damage. May cause kidney damage. May cause blindness. This substance has caused adverse reproductive and fetal effects in animals.  
**Target Organs:** Kidneys, central nervous system, liver.

**Potential Health Effects**

**Eye:** Contact with eyes may cause severe irritation, and possible eye burns.  
**Skin:** Exposure may cause irritation and possible burns. May be absorbed through the skin.  
**Ingestion:** May be fatal or cause blindness if swallowed. Cannot be made non-
poisonous. May cause central nervous system depression, kidney damage, and liver damage. Symptoms may include: headache, excitement, fatigue, nausea, vomiting, stupor, and coma. May cause severe gastrointestinal tract irritation with nausea, vomiting and possible burns.

**Inhalation:** Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Prolonged exposure may result in dizziness and general weakness. May cause severe irritation of the upper respiratory tract with pain, burns, and inflammation.

**Chronic:** Prolonged or repeated eye contact may cause conjunctivitis. Prolonged or repeated skin contact may cause defatting and dermatitis. Prolonged or repeated exposure may cause adverse reproductive effects. May cause liver and kidney damage.

**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.

**Skin:** Get medical aid immediately. Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Destroy contaminated shoes.

**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:** 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.

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

**Antidote:** None

**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. Vapors can travel to a source of ignition and flash back. Use water spray to keep fire-exposed containers cool. May form explosive peroxides. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

**Extinguishing Media:** Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.

**Flash Point:** 116e deg F ( 46.67 deg C)

**Autoignition Temperature:** Not applicable.

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

**Upper:** Not available.

**NFPA Rating:** (estimated) Health: 3; Flammability: 2; Instability: 1

**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.

## Section 7 - Handling and Storage

**Handling:** Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Do not get in eyes, on skin, or on clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. 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 cool, dry place. Store in a tightly closed container.

## Section 8 - Exposure Controls, Personal Protection

**Engineering Controls:** Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

### Exposure Limits

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>NIOSH</th>
<th>OSHA - Final PELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Ethyl alcohol</td>
<td>1000 ppm TWA</td>
<td>1000 ppm TWA; 1900 mg/m3 TWA 3300 ppm IDLH</td>
<td>1000 ppm TWA; 1900 mg/m3 TWA</td>
</tr>
<tr>
<td>Phenol</td>
<td>5 ppm TWA; Skin - potential significant contribution to overall exposure by the cutaneous route</td>
<td>5 ppm TWA; 19 mg/m3 TWA 250 ppm IDLH</td>
<td>5 ppm TWA; 19 mg/m3 TWA</td>
</tr>
<tr>
<td>Basic fuchsin</td>
<td>none listed</td>
<td>none listed</td>
<td>none listed</td>
</tr>
<tr>
<td>Methyl alcohol</td>
<td>200 ppm TWA; 250 ppm STEL; Skin - potential significant contribution to overall exposure by the cutaneous route</td>
<td>200 ppm TWA; 260 mg/m3 TWA 6000 ppm IDLH</td>
<td>200 ppm TWA; 260 mg/m3 TWA</td>
</tr>
<tr>
<td>Isopropyl alcohol</td>
<td>200 ppm TWA; 400 ppm STEL</td>
<td>400 ppm TWA; 980 mg/m3 TWA 2000 ppm IDLH</td>
<td>400 ppm TWA; 980 mg/m3 TWA</td>
</tr>
</tbody>
</table>

**OSHA Vacated PELs:** Water: No OSHA Vacated PELs are listed for this chemical. Ethyl alcohol: 1000 ppm TWA; 1900 mg/m3 TWA Phenol: 5 ppm TWA; 19 mg/m3 TWA Basic fuchsin: No OSHA Vacated PELs are listed for this chemical. Methyl alcohol: 200 ppm TWA; 260 mg/m3 TWA Isopropyl alcohol: 400 ppm TWA; 980 mg/m3 TWA
mg/m³ TWA

**Personal Protective Equipment**

**Eyes:** Wear safety glasses and chemical goggles if splashing is possible.

**Skin:** Wear appropriate gloves to prevent skin exposure.

**Clothing:** Wear appropriate protective clothing to minimize contact with skin.

**Respirators:** A NIOSH/MSHA approved or European Standard EN 149 air purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected.

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**Section 9 - Physical and Chemical Properties**

- **Physical State:** Liquid
- **Appearance:** not available
- **Odor:** none reported
- **pH:** Not available.
- **Vapor Pressure:** Not available.
- **Vapor Density:** Not available.
- **Evaporation Rate:** Not available.
- **Viscosity:** Not available.
- **Boiling Point:** Not available.
- **Freezing/Melting Point:** Not available.
- **Decomposition Temperature:** Not available.
- **Solubility:** Not available.
- **Specific Gravity/Density:** Not available.
- **Molecular Formula:** Mixture
- **Molecular Weight:** Not available.

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**Section 10 - Stability and Reactivity**

- **Chemical Stability:** Stable. This material may be sensitive to peroxide formation.
- **Conditions to Avoid:** High temperatures, incompatible materials, ignition sources.
- **Incompatibilities with Other Materials:** Acids (mineral, non-oxidizing, e.g. hydrochloric acid, hydrofluoric acid, muriatic acid, phosphoric acid), acids (mineral, oxidizing, e.g. chromic acid, hypochlorous acid, nitric acid, sulfuric acid), acids (organic, e.g. acetic acid, benzoic acid, formic acid, methanoic acid, oxalic acid), azo, diazo, and hydrazines (e.g. dimethyl hydrazine, hydrazine, methyl hydrazine), isocyanates (e.g. methyl isocyanate), metals (alkali and alkaline, e.g. cesium, potassium, sodium), nitriles (e.g. potassium nitride, sodium nitride), peroxides and hydroperoxides (organic, e.g. acetyl peroxide, benzoyl peroxide, butyl peroxide, methyl ethyl ketone peroxide), epoxides (e.g. butyl glycidyl ether), oxidizing agents (strong, e.g. bromine, hydrogen peroxide, nitrogen dioxide, potassium nitrate), reducing agents (strong, e.g. aluminum carbide, chlorosilane, hydrogen phosphide, lithium hydride), water reactive substances (e.g. acetic anhydride, alkyl aluminum chloride, calcium carbide, ethyl dichlorosilane), Isopropanol is susceptible to autoxidation and therefore should be classified as peroxidizable., explosives (e.g. ammonium nitrate, hydrazoic acid, sodium azide), polymerizable compounds (e.g. butadiene, methyl acrylate, styrene, vinyl chloride).
- **Hazardous Decomposition Products:** Irritating and toxic fumes and gases.
- **Hazardous Polymerization:** Has not been reported.
Section 11 - Toxicological Information

RTECS#:
CAS# 7732-18-5: ZC0110000
CAS# 64-17-5: KQ6300000
CAS# 108-95-2: SJ3325000
CAS# 632-99-5: CX9850000
CAS# 67-56-1: PC1400000
CAS# 67-63-0: NT8050000

LD50/LC50:
CAS# 7732-18-5:
  Oral, rat: LD50 = >90 mL/kg;

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 = 7060 mg/kg;
  Oral, rat: LD50 = 9000 mg/kg;

CAS# 108-95-2:
  Draize test, rabbit, eye: 5 mg Severe;
  Draize test, rabbit, skin: 500 mg/24H Severe;
  Draize test, rabbit, skin: 100 mg Mild;
  Inhalation, mouse: LC50 = 177 mg/m3;
  Inhalation, mouse: LC50 = 177 mg/m3/4H;
  Inhalation, rat: LC50 = 316 mg/m3;
  Inhalation, rat: LC50 = 316 mg/m3/4H;
  Oral, mouse: LD50 = 270 mg/kg;
  Oral, rat: LD50 = 317 mg/kg;
  Oral, rat: LD50 = 512 mg/kg;
  Skin, rabbit: LD50 = 630 mg/kg;
  Skin, rat: LD50 = 669 mg/kg;
  Skin, rat: LD50 = 1500 mg/kg;

CAS# 632-99-5:

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# 67-63-0: 
Draize test, rabbit, eye: 100 mg Severe;  
Draize test, rabbit, eye: 10 mg Moderate;  
Draize test, rabbit, eye: 100 mg/24H Moderate;  
Draize test, rabbit, skin: 500 mg Mild;  
Inhalation, mouse: LC50 = 53000 mg/m3;  
Inhalation, rat: LC50 = 16000 ppm/8H;  
Inhalation, rat: LC50 = 72600 mg/m3;  
Oral, mouse: LD50 = 3600 mg/kg;  
Oral, mouse: LD50 = 3600 mg/kg;  
Oral, rabbit: LD50 = 6410 mg/kg;  
Oral, rat: LD50 = 5045 mg/kg;  
Oral, rat: LD50 = 5000 mg/kg;  
Skin, rabbit: LD50 = 12800

Carcinogenicity: 
CAS# 7732-18-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.  
CAS# 64-17-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65.  
CAS# 108-95-2: Not listed by ACGIH, IARC, NTP, or CA Prop 65.  
CAS# 632-99-5: 
- ACGIH: Not listed.  
- California: Not listed. 
- NTP: Not listed.  
- IARC: Group 2B carcinogen

CAS# 67-56-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65.  
CAS# 67-63-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65.

Epidemiology: No data available.  
Teratogenicity: No data available.  
Reproductive Effects: 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. This syndrome has been associated with alcoholic women who drank heavily and chronically during pregnancy.  
Mutagenicity: No data available.  
Neurotoxicity: No data available.  
Other Studies: 

Ecotoxicity: Daphnia: Fathead Minnow: EC50=4.0 mg/l; 96-hour; cas#108-95-2Daphnia: Fathead Minnow: EC50=12.0 mg/l; 48-hour; cas#108-95-2 No data available.  
Environmental: No information available.  
Physical: No information available.  
Other: CAS# 108-95-2: NOEC for Lolium perenne and Raphanus sativus was 1 mg/l
in a plant germination study. The 96-hour LC50 was 11 mg/l in Gammarus fasciatus and the 48-hour LC50 was 11.2 mg/L in Leuciscus idus.

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# 108-95-2: waste number U188.
CAS# 67-56-1: waste number U154 (Ignitable waste).

Section 14 - Transport Information

<table>
<thead>
<tr>
<th>IATA</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Shipping Name:</td>
<td>FLAMMABLE LIQUIDS, N.O.S.</td>
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<tr>
<td>Hazard Class:</td>
<td>3</td>
</tr>
<tr>
<td>UN Number:</td>
<td>UN1993</td>
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<tr>
<td>Packing Group:</td>
<td>III</td>
</tr>
<tr>
<td>Additional Info:</td>
<td></td>
</tr>
</tbody>
</table>

Section 15 - Regulatory Information

Hazard Symbols: T

Risk Phrases:
R 34 Causes burns.
R 24/25 Toxic in contact with skin and if swallowed.

Safety Phrases:
S 36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
S 45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S 28A After contact with skin, wash immediately with plenty of water.

Section 16 - Additional Information

MSDS Creation Date: 7/28/1998
Revision #4 Date: 10/03/2005
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.