Material Safety Data Sheet
Carbol Fuchsin Solution

ACC# 41037

Section 1 - Chemical Product and Company Identification

**MSDS Name:** Carbol Fuchsin Solution  
**Catalog Numbers:** S71256  
**Synonyms:** None  
**Company Identification:**  
Fisher Scientific  
1 Reagent Lane  
Fair Lawn, NJ 07410  
**For information, call:** 201-796-7100  
**Emergency Number:** 201-796-7100  
**For CHEMTREC assistance, call:** 800-424-9300  
**For International CHEMTREC assistance, call:** 703-527-3887

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>Fuschin, Basic</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>

**Hazard Symbols:** T  
**Risk Phrases:** 34 24/25

Section 3 - Hazards Identification

**EMERGENCY OVERVIEW**

**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.

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### 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 for cutaneous absorption</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>Fuscin, Basic</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 for cutaneous absorption</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 Fuscin, Basic: 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

**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.

### 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), nitrides (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, rat: LC50 = 316 mg/m3;
Oral, mouse: LD50 = 270 mg/kg;
Oral, rat: LD50 = 317 mg/kg;
Skin, rabbit: LD50 = 630 mg/kg;
Skin, rat: LD50 = 669 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 mg/kg;

**Carcinogenicity:**
CAS# 7732-18-5: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. CAS# 64-17-5: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. CAS# 108-95-2:
IARC: IARC Group 3 - not classifiable CAS# 632-99-5:
OSHA: Possible Select carcinogen
IARC: Group 2B carcinogen CAS# 67-56-1: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA. CAS# 67-63-0:
IARC: IARC Group 3 - not classifiable

**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.

**Neurotoxicity:** No data available.

**Mutagenicity:** No data available.
Other Studies: No data available.

Section 12 - Ecological Information

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.

Section 14 - Transport Information

<table>
<thead>
<tr>
<th>Shipping Name:</th>
<th>US DOT</th>
<th>IATA</th>
<th>RID/ADR</th>
<th>IMO</th>
<th>Canada TDG</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLAMMABLE LIQUIDS, N.O.S.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>FLAMMABLE LIQUID,NOS (ETHANOL SOLUTION)</td>
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<td>Hazard Class:</td>
<td>3</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
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<td>Packing Group:</td>
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<td>II</td>
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<td>Additional Info:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>FP 47C</td>
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</tbody>
</table>

Section 15 - Regulatory Information

US FEDERAL

TSCA
CAS# 7732-18-5 is listed on the TSCA inventory.
CAS# 64-17-5 is listed on the TSCA inventory.
CAS# 108-95-2 is listed on the TSCA inventory.
CAS# 632-99-5 is listed on the TSCA inventory.
CAS# 67-56-1 is listed on the TSCA inventory.
CAS# 67-63-0 is listed on the TSCA inventory.

Health & Safety Reporting List
CAS# 108-95-2: Effective 6/1/87; Sunset 6/1/97 CAS# 67-63-0: Effective 12/15/86; Sunset
12/15/96

**Chemical Test Rules**
None of the chemicals in this product are under a Chemical Test Rule.

**Section 12b**
CAS# 108-95-2: Present

**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# 108-95-2: 1000 lb final RQ; 454 kg final RQ CAS# 67-56-1: 5000 lb final RQ; 2270 kg final RQ

**SARA Section 302 Extremely Hazardous Substances**
CAS# 108-95-2: 500 lb TPQ (lower threshold); 1000 lb TPQ (upper threshold)

**SARA Codes**

**Section 313**
This material contains Phenol (CAS# 108-95-2, 5 0 6 2%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373. This chemical is not at a high enough concentration to be reportable under Section 313. This chemical is not at a high enough concentration to be reportable under Section 313.

**Clean Air Act:**
CAS# 108-95-2 is listed as a hazardous air pollutant (HAP). CAS# 67-56-1 is listed as a hazardous air pollutant (HAP). This material does not contain any Class 1 Ozone depletors. This material does not contain any Class 2 Ozone depletors.

**Clean Water Act:**
CAS# 108-95-2 is listed as a Hazardous Substance under the CWA. CAS# 108-95-2 is listed as a Priority Pollutant under the Clean Water Act. CAS# 108-95-2 is listed as a Toxic Pollutant under the Clean Water Act.

**OSHA:**
None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE**
CAS# 7732-18-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
CAS# 64-17-5 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.
CAS# 108-95-2 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.
CAS# 632-99-5 is not present on state lists from CA, PA, MN, MA, FL, or NJ.
CAS# 67-56-1 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.
CAS# 67-63-0 can be found on the following state right to know lists: California, New Jersey, Pennsylvania, Minnesota, Massachusetts.

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:**

**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.

WGK (Water Danger/Protection)
CAS# 7732-18-5: No information available.
CAS# 64-17-5: 0
CAS# 108-95-2: 2
CAS# 632-99-5: No information available.
CAS# 67-56-1: 1
CAS# 67-63-0: 1

Canada - DSL/NDSL
CAS# 7732-18-5 is listed on Canada's DSL List.
CAS# 64-17-5 is listed on Canada's DSL List.
CAS# 108-95-2 is listed on Canada's DSL List.
CAS# 632-99-5 is listed on Canada's DSL List.
CAS# 67-56-1 is listed on Canada's DSL List.
CAS# 67-63-0 is listed on Canada's DSL List.

Canada - WHMIS
This product has a WHMIS classification of B3, D2B.

Canadian Ingredient Disclosure List
CAS# 64-17-5 is listed on the Canadian Ingredient Disclosure List.
CAS# 108-95-2 is listed on the Canadian Ingredient Disclosure List.
CAS# 67-56-1 is listed on the Canadian Ingredient Disclosure List.
CAS# 67-63-0 is listed on the Canadian 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 ppm (1900 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 ppm (1900 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-TACLAND: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# 108-95-2: OEL-ARAB Republic of Egypt:TWA 5 ppm (19 mg/m3); Skin OEL-AUSTRALIA:TWA 5 ppm (19 mg/m3); Skin OEL-BELGIUM:TWA 5 ppm (19 mg/m3); Skin OEL-CZECHOSLOVAKIA:TWA 20 mg/m3; STEL 40 mg/m3 OEL-DENMARK: TWA 5 ppm (19 mg/m3); Skin OEL-FINLAND:TWA 5 ppm (19 mg/m3); STEL 10 ppm (38 mg/m3); Skin OEL-FRANCE:TWA 5 ppm (19 mg/m3); Skin OEL-GERMANY:TWA 5 ppm (19 mg/m3); Skin OEL-HUNGARY:TWA 4 mg/m3; STEL 8 mg/m3; Skin OEL-JAPAN:TWA 5 ppm (19 mg/m3); Skin OEL-THE NETHERLANDS:TWA 5 ppm (19 mg/m3); Skin OEL-THE PHILIPPINES:TWA 5 ppm (10 mg/m3); Skin OEL-POLAND:TWA 10 ppm OEL-RUSSIA:TWA 5 ppm; STEL 0.3 mg/m3; Skin OEL-SWEDEN:TWA 1 ppm (4 mg/m3); STEL 2 ppm (8 mg/m3); Skin OEL-SWITZERLAND:TWA 5 ppm (19 mg/m3); STEL 10 ppm (38 mg/m3); Skin OEL-TACLAND:TWA 5 ppm (19 mg/m3); Skin OEL-TURKEY:TWA 5 ppm (19 mg/m3); Skin OEL-UNITED KINGDOM:TWA 5 ppm
(19 mg/m3); STEL 10 ppm; Skin 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 OEL-AUSTRALIA:TWA 200 ppm (260 mg/m3); STEL 250 ppm; Skin OEL-BELGIUM:TWA 200 ppm (262 mg/m3); STEL 250 ppm; Skin OEL-CZECHOSLOVAKIA:TWA 100 ppm (260 mg/m3); STEL 500 mg/m3 OEL-DENMARK:TWA 200 ppm (260 mg/m3); Skin OEL-FINLAND:TWA 200 ppm (260 mg/m3); STEL 250 ppm; Skin OEL-FRANCE:TWA 200 ppm (260 mg/m3); STEL 1000 ppm (1300 mg/m3) OEL-GERMANY:TWA 200 ppm (260 mg/m3); Skin OEL-HUNGARY:TWA 50 mg/m3; STEL 100 mg/m3; Skin JAN9 OEL-JAPAN:TWA 200 ppm (260 mg/m3); Skin OEL-THE NETHERLANDS:TWA 200 ppm (260 mg/m3); Skin OEL-THE PHILIPPINES:TWA 200 ppm (260 mg/m3) OEL-POLAND:TWA 100 mg/m3 OEL-RUSSIA:TWA 200 ppm; STEL 5 mg/m3; Skin OEL-SWEDEN:TWA 200 ppm (250 mg/m3); STEL 250 ppm (350 mg/m3); Skin OEL-SWITZERLAND:TWA 200 ppm (260 mg/m3); STEL 400 ppm; Skin OEL-THAILAND:TWA 200 ppm (260 mg/m3) OEL-TURKEY:TWA 200 ppm (260 mg/m3) OEL-UNITED KINGDOM:TWA 200 ppm (260 mg/m3); STEL 250 ppm; Skin OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

**Section 16 - Additional Information**

**MSDS Creation Date:** 7/28/1998  
**Revision #3 Date:** 3/18/2003

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 event shall Fisher 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 Fisher has been advised of the possibility of such damages.