**SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME:** Spears® FlameGuard® FS-5 Low VOC Cement for CPVC Plastic Pipe

**PRODUCT USE:** Solvent Cement for CPVC Plastic Pipe

**MANUFACTURER:** Spears® Manufacturing Company

**SUPPLIER:**
15853 Olden Street
Sylmar, CA 91342
Tel. 818-364-1611

**EMERGENCY:** Transportation/Medical issues: Tel. 800-535-5053 or 352-323-3500 (outside of USA) INFOTRAC

**SECTION 2 - HAZARDS IDENTIFICATION**

**GHS CLASSIFICATION:**
- Acute Toxicity: Category 4
- Skin Irritation: Category 3
- Skin Sensitization: NO
- Eye: Category 2B

**Hazard Statements**
- Ingestion: Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.
- Contact with eyes: Rinse mouth with water. Give 1 or 2 glasses of water or milk to dilute. Do not induce vomiting. Seek medical advice immediately.

**Precautionary Statements**
- H225: Highly flammable liquid and vapor
- H261: Prevent breathing of vapor
- H361: May cause drowsiness or dizziness
- H319: Causes serious eye irritation
- H332: Harmful if inhaled
- H336: May cause drowsiness or dizziness
- H335: May cause respiratory irritation
- H337+P333: Get medical advice/attention
- H373: Slight irritant

**WHMIS CLASSIFICATION:** CLASS B, DIVISION 2

**SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS**

**CAS#** | **EINECS #** | **CONCENTRATION**
--- | --- | ---
109-99-9 | 203-726-8 | 40 - 60
78-93-3 | 201-159-9 | 2 - 15
67-64-1 | 200-662-2 | 2 - 15
106-98-1 | 203-631-1 | 2 - 10

**Section 3.1:** All of the constituents of this adhesive product are listed on the TSCA inventory of chemical substances maintained by the US EPA, or are exempt from that listing.

**Section 3.2:** This chemical is subject to the reporting requirements of Section 313 of the Emergency Planning and Community Right-to-Know Act of 1986 (40CFR372).

**SECTION 4 - FIRST AID MEASURES**

**Contact with eyes:** Flush eyes immediately with plenty of water for 15 minutes and seek medical advice immediately.
**Skin contact:** Remove contaminated clothing and shoes. Wash skin thoroughly with soap and water. If irritation develops, seek medical advice.
**Inhalation:** Remove to fresh air. If breathing is stopped, give artificial respiration. If breathing is difficult, give oxygen. Seek medical advice.

**SECTION 5 - FIREFIGHTING MEASURES**

**Suitable Extinguishing Media:**
- Water spray or stream.
- Dry chemical powder, carbon dioxide gas, foam, Halon, water fog.

**Unsuitable Extinguishing Media:**
- Carbon dioxide gas, foam, Halon, water fog.

**Combustion Products:**
- Oxides of carbon, hydrogen chloride and smoke

**Protection for Firefighters:**
- Self-contained breathing apparatus or full-face positive pressure airline masks.

**SECTION 6 - ACCIDENTAL RELEASE MEASURES**

**Personal precautions:**
- Keep away from heat, sparks and open flame.
- Do not eat, drink or smoke while handling.

**Environmental Precautions:**
- Prevent product or liquids contaminated with product from entering sewers, drains, soil or open water course.
- Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.

**METHODS FOR CLEANING UP:**
- Clean up with sand or other inert absorbent material. Transfer to a closable steel vessel.
- Aluminum or plastic containers

**SECTION 7 - HANDLING AND STORAGE**

**Handling:**
- Avoid breathing of vapor, avoid contact with eyes, skin and clothing.
- Avoid ignition sources, use only electrically grounded handling equipment and ensure adequate ventilation/fume exhaust hoods.

**Storage:**
- Store in ventilated room or shade below 33 °C (90 °F) and away from direct sunlight.
- Keep away from ignition sources and incompatible materials: caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates.
- Use of solvent-resistant gloves or solvent-resistant barrier cream should provide adequate protection when normal adhesive application practices and procedures are used for making structural bonds.

**SECTION 8 - PRECAUTIONS TO CONTROL EXPOSURE / PERSONAL PROTECTION**

**EXPOSURE LIMITS:**

<table>
<thead>
<tr>
<th>Component</th>
<th>ACGIH TLV</th>
<th>ACGIH STEL</th>
<th>OSHA PEL</th>
<th>OSHA STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrahydrofuran (THF)</td>
<td>50 ppm</td>
<td>100 ppm</td>
<td>200 ppm</td>
<td></td>
</tr>
<tr>
<td>Methyl Ethyl Ketone (MEK)</td>
<td>200 ppm</td>
<td>300 ppm</td>
<td>200 ppm</td>
<td></td>
</tr>
<tr>
<td>Acetone</td>
<td>500 ppm</td>
<td>750 ppm</td>
<td>1000 ppm</td>
<td></td>
</tr>
<tr>
<td>Cyclohexanone</td>
<td>20 ppm</td>
<td>50 ppm</td>
<td>50 ppm</td>
<td></td>
</tr>
</tbody>
</table>

**Engineering Controls:** Use local exhaust as needed.

**Personal Protective Equipment (PPE):**
- Respiratory Protection: Prevent inhalation of the solvents. Use in a well-ventilated room. Open doors and/or windows to ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above.
- Skin Protection: Prevent contact with the skin as much as possible. Butyl rubber gloves should be used for frequent immersion.

**Eye Protection:** Avoid contact with eyes, wear splash-proof chemical goggles, face shield, safety glasses (spectacles) with brow guards and side shields, etc. as may be appropriate for the exposure.

**Skin Protection:** Prevent contact with the skin as much as possible. Butyl rubber gloves should be used for frequent immersion.

**Respiratory Protection:** Prevent inhalation of the solvents. Use in a well-ventilated room. Open doors and/or windows to ensure airflow and air changes. Use local exhaust ventilation to remove airborne contaminants from employee breathing zone and to keep contaminants below levels listed above.

**With normal use, the Exposure Limit Value will not usually be reached. When limits approached, use respiratory protection equipment.
SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Red, heavy syrupy liquid
Odor: Ethereal
pH: Not Applicable
Melting/Freezing Point: -108.5 °C (-163.3 °F) Based on first melting component: THF
Boiling Point: 66 °C (151 °F) Based on first boiling component: THF
Flash Point: -20 °C (-4 °F) TCC based on THF
Specified Gravity: 0.986 ± 0.01 @ 23 °C ± 2 ° (73 °F ± 3.6 °)
Vapor Pressure: 129 mm Hg @ 20 °C (68 °F) Based on THF
Vapor Density: <2 (Air = 1)
Solubility: Solvent portion soluble in water. Resin portion separates out.
Partition Coefficient n-octanol/water: Not Available
Decomposition Temperature: 321 °C (610 °F) based on THF
Auto-ignition Temperature: Not Applicable
Ether-Like

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable
Hazardous decomposition products: None in normal use. When forced to burn, this product gives off oxides of carbon, hydrogen chloride and smoke.
Conditions to avoid: Keep away from heat, sparks, open flame and other ignition sources.
Incompatible Materials: Oxidizers, strong acids and bases, amines, ammonia

SECTION 11 - TOXICOLOGICAL INFORMATION

Likely Routes of Exposure: Inhalation, Eye and Skin Contact
Acute symptoms and effects:
  Inhalation: Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.
  Eye Contact: Vapors slightly uncomfortable. Overexposure may result in severe eye injury with conjunctival inflammation on contact with the liquid.
  Skin Contact: Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.
  Ingestion: May cause nausea, vomiting, diarrhea and mental sluggishness.
Chronic (long-term) effects: None known to humans
Toxicity: LD50 LC50
Tetrahydrofuran (THF) Oral: 2842 mg/kg (rat) Inhalation 3 hrs. 21,000 mg/m² (rat)
Methyl Ethyl Ketone (MEK) Oral: 2737 mg/kg (rat), Dermal: 6480 mg/kg (rabbit) Inhalation 8 hrs. 23,500 mg/m² (rat)
Acetone Oral: 5800 mg/kg (rat) Inhalation 50,100 mg/m² (rat)
Cyclohexanone Oral: 1535 mg/kg (rat), Dermal: 948 mg/kg (rabbit) Inhalation 4 hrs. 8,000 PPM (rat)

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity: None Known
Mobility: In normal use, emission of volatile organic compounds (VOC's) to the air takes place, typically at a rate of ≤ 490 g/l.
Degradability: Biodegradable
Bioaccumulation: Minimal to none.

SECTION 13 - WASTE DISPOSAL CONSIDERATIONS

Follow local and national regulations. Consult disposal expert.

SECTION 14 - TRANSPORT INFORMATION

Proper Shipping Name: Adhesives
Hazard Class: 3
Secondary Risk: None
Identification Number: UN 1133
Packing Group: PG II
Label Required: Class 3 Flammable Liquid

DIT Information

TDG INFORMATION

TDG CLASS: FLAMMABLE LIQUID 3
SHIPPING NAME: ADHESIVES
UN NUMBER/PACKING GROUP: UN 1133, PG II

SECTION 15 - REGULATORY INFORMATION

Precautionary Label Information: Highly Flammable, Irritant
Symbols: P, Xi
Risk Phrases: R11: Highly flammable. R66: Repeated exposure may cause skin dryness or cracking
R36/37: Irritating to eyes and respiratory system. R67: Vapors may cause drowsiness and dizziness
S3: Keep container in a well-ventilated place. S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S16: Keep away from sources of ignition - No smoking. S33: Take precautionary measures against static discharges.

Environmental Health & Safety
E-mail address: EHSInfo@SpearsMfg.net
Training necessary: Yes, training in practices and procedures contained in product literature.
Reissue date / reason for reissue: 03-23-2011 / Manufacturer Update
Intended Use of Product: Solvent Cement for CPVC Plastic Pipe

This product is intended for use by skilled individuals at their own risk. The information contained herein is based on data considered accurate based on current state of knowledge and experience. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.