MATERIAL SAFETY DATA SHEET

SECTION I

MANUFACTURER'S NAME
IPS Corporation
17109 S. Main St., P.O. Box 379, Gardena, CA. 90248

CHEMICAL NAME and FAMILY
Solvent Cement for PVC Plastic Pipe
Mixture of PVC Resin and Organic Solvents

TRADE NAME:
WELD-ON 705, 707, 710, 711, 717 and 721 for PVC Plastic Pipe

FORMULA: Proprietary

SECTION II - HAZARDOUS INGREDIENTS

None of the ingredients below are listed as carcinogens by IARC, NTP or OSHA

<table>
<thead>
<tr>
<th>CAS#</th>
<th>APPROX %</th>
<th>ACGIH-TLV</th>
<th>ACGIH-STEL</th>
<th>OSHA-PEL</th>
<th>OSHA-STEL</th>
<th>(A) AEL</th>
<th>(B) STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyvinyl Chloride Resin (PVC)</td>
<td>109-99-9</td>
<td>25-70</td>
<td>200 PPM</td>
<td>250 PPM</td>
<td>200 PPM</td>
<td>255 PPM</td>
<td>25 PPM</td>
</tr>
<tr>
<td>Tetrahydrofuran (THF)**</td>
<td>108-94-1</td>
<td>1-10</td>
<td>25 PPM Skin</td>
<td>25 PPM Skin</td>
<td></td>
<td></td>
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</table>

**Information found in a report from the National Toxicology Program (NTP) on an inhalation study in rats and mice suggests that Tetrahydrofuran (THF) can cause tumors in animals. In the study the rats and mice were exposed to THF vapor levels up to 1800 PPM for two years (their lifetime), 6 hours/day, 5 days/week. Test results showed evidence of liver tumors in female mice and kidney tumors in male rats. No evidence of tumors was seen in female rats and male mice. There is no data linking Tetrahydrofuran exposure with cancer in humans.

SECTION III - PHYSICAL DATA

<table>
<thead>
<tr>
<th>APPEARANCE</th>
<th>ODOR</th>
<th>BOILING POINT (°F/°C)</th>
<th>FREEZING POINT</th>
</tr>
</thead>
<tbody>
<tr>
<td>705 - gray or clear, syrupy liquid; 707 - clear, medium syrupy liquid; 710 - clear, thin syrupy liquid; 711 - white or opaque gray, syrupy liquid; 717 - opaque gray or clear, medium syrupy liquid; 721 - blue, medium syrupy liquid</td>
<td>Ethereal (Threshold = 2-50 PPM)</td>
<td>151°F (67°C)</td>
<td>-163°F (-108.5°C)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SPECIFIC GRAVITY @ 73°F ± 3.6°F (20°C ± 2°C)</th>
<th>VAPOR PRESSURE (mm Hg.)</th>
<th>PERCENT VOLATILE BY VOLUME (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Typical for 705 and 707: 0.920 ± 0.040/ for 710: 0.900 ± 0.040/ for 711: 0.951 ± 0.040/ for 717: 0.947 ± 0.040/ For 721: 0.930 ± 0.040</td>
<td>143 mm Hg. based on first boiling component, THF @ 68°F (20°C)</td>
<td>Approx: 80 - 90 %</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>VAPOR DENSITY (Air = 1)</th>
<th>EVAPORATION RATE (BUAC = 1)</th>
<th>SOLUBILITY IN WATER</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.49</td>
<td>&gt; 1.0</td>
<td>Solvent portion completely soluble in water. Resin portion separates out.</td>
</tr>
</tbody>
</table>

VOC STATEMENT: Depending on the specific product, maximum VOC emission per SCAQMD Rule 1168, Test Method 316A: variable up to 510 Grams/Liter.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT
-4°F (-20°C) T.C.C. Based on THF

FLAMMABLE LIMITS (PERCENT BY VOLUME)
LEL: 2.0
UEL: 11.8

FIREFIGHTING MEDIA
Ansur “Purple K” potassium bicarbonate dry chemical, carbon dioxide, National Aer-O-Foam universal alcohol resistant foam, water spray.

SPECIAL FIREFIGHTING PROCEDURES
Evacuate enclosed areas. Stay upwind. Close or confined quarters require self-contained breathing apparatus, positive pressure masks or airline masks. Use water spray to cool containers, to flush spills from source of ignition and to disperse vapors.

UNUSUAL FIREFIGHTING HAZARDS
Fire hazard because of low flash point and high volatility. Vapors are heavier than air and may travel to source(s) of ignition at or near floor or lower levels and may flash back.
SECTION V - HEALTH HAZARD DATA

PRIMARY ROUTES OF ENTRY:  

- Inhalation  
- Skin Contact  
- Eye Contact  
- Ingestion

EFFECT OF OVEREXPOSURE

ACUTE:

- Inhalation: Severe overexposure may result in nausea, dizziness, headache. Can cause drowsiness, irritation of eyes and nasal passages.
- Skin Contact: Skin irritant. Liquid contact may remove natural skin oils resulting in skin irritation. Dermatitis may occur with prolonged contact.
- Skin Absorption: Prolonged or widespread exposure may result in the absorption of harmful amounts of material.
- Eye Contact: Overexposure may result in severe eye injury with corneal or conjunctival inflammation on contact with the liquid. Vapors slightly uncomfortable.
- Ingestion: Moderately toxic. May cause nausea, vomiting, diarrhea. May cause mental sluggishness.

CHRONIC:

Symptoms of respiratory tract irritation and damage to respiratory epithelium were reported in rats exposed to 5000 ppm THF for 90 days. Elevation of SGPT suggests a disturbance in liver function. The NOEL was reported to be 200 ppm.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Individuals with pre-existing diseases of the eyes, skin or respiratory system may have increased susceptibility to the toxicity of excessive exposures.

EMERGENCY AND FIRST AID PROCEDURES

- Inhalation: If overcome by vapors, remove to fresh air and if breathing stopped, give artificial respiration. If breathing is difficult, give oxygen. Call physician.
- Eye Contact: Flush eyes with plenty of water for 15 minutes and call a physician.
- Skin Contact: Remove contaminated clothing and shoes. Wash skin with plenty of soap and water for at least 15 minutes. If irritation develops, get medical attention.
- Ingestion: Give 1 or 2 glasses of water or milk. Do not induce vomiting. Call physician or poison control center immediately.

SECTION VI - REACTIVITY

STABILITY:  

- UNSTABLE

STABLE:  

- X

CONDITIONS TO AVOID:  

- Keep away from heat, sparks, open flame and other sources of ignition.

INCOMPATIBILITY:

- (MATERIALS TO AVOID) Caustics, ammonia, inorganic acids, chlorinated compounds, strong oxidizers and isocyanates.

HAZARDOUS DECOMPOSITION PRODUCTS:

- When forced to burn, this product gives out carbon monoxide, carbon dioxide, hydrogen chloride and smoke.

HAZARDOUS POLYMERIZATION:

- MAY OCCUR

- WILL NOT OCCUR:  

- X

CONDITIONS TO AVOID:  

- Keep away from heat, sparks, open flame and other sources of ignition.

SECTION VII - SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:

Eliminate all ignition sources. Avoid breathing of vapors. Keep liquid out of eyes. Flush with large amount of water. Contain liquid with sand or earth. Absorb with sand or nonflammable absorbent material and transfer into steel drums for recovery or disposal. Prevent liquid from entering drains.

WASTE DISPOSAL METHOD:

Follow local, State and Federal regulations. Consult disposal expert. Can be disposed of by incineration. Excessive quantities should not be permitted to enter drains. Empty containers should be air dried before disposing. Hazardous Waste Code: 214.

SECTION VIII - SPECIAL PROTECTION INFORMATION

REPRODUCTIVE EFFECTS:  

- TERATOGENICITY: N. AP.

- MUTAGENICITY: N. AP.

- EMBRYOTOXICITY: N. AP.

- SENSITIZATION TO PRODUCT: N. AP.

- SYNERGISTIC PRODUCTS: N. AV.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE:

- N. AP.

- N. AP.

- N. AP.

- N. AP.

- N. AP.

EMERGENCY AND FIRST AID PROCEDURES:

- Inhalation:
- Skin Contact:
- Eye Contact:
- Ingestion:

PATIENT PROTECTIVE GEAR:

- RESPIRATORY PROTECTION (Specify type):
- VENTILATION:
- PROTECTIVE GLOVES:
- EYE PROTECTION:
- OTHER PROTECTIVE EQUIPMENT AND HYGIENIC PRACTICES:

OTHER PRECAUTIONS:

- FOLLOW ALL PRECAUTIONARY INFORMATION GIVEN ON CONTAINER LABEL, PRODUCT BULLETINS AND OUR SOLVENT CEMENTING LITERATURE. ALL MATERIAL HANDLING EQUIPMENT SHOULD BE ELECTRICALLY GROUNDED.

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