IPEX

MATERIAL SAFETY DATA SHEET

Date Revised: OCT 2006
Supersedes: Original

Information on this form is furnished solely for the purpose of compliance with the Occupational Safety and Health Act and shall not be used for any other purpose. IPS Corporation urges the customers receiving this Material Safety Data Sheet to study it carefully to become aware of the hazards, if any, of the product involved. In the interest of safety, you should notify your employees, agents and contractors of the information on this sheet.

SECTION I

MANUFACTURER'S NAME
IPS Corporation

ADDRESS
17109 S. Main St., P.O. Box 379, Gardena, CA. 90248 U.S.A.

CHEMICAL NAME and FAMILY
Mixture of CPVC Resin and Organic Solvents

TRADE NAME:
IPEX SYSTEM 636 Cement for CPVC Plastic Pipe

SECTION II - HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS#</th>
<th>APPROX % WEIGHT</th>
<th>ACGIH TLV</th>
<th>ACGIH STEL</th>
<th>OSHA PEL</th>
<th>OSHA STEL</th>
<th>LD50</th>
<th>LC50</th>
<th>(A) AEL</th>
<th>(B) STEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chlorinated Polyvinyl Chloride Resin (CPVC)</td>
<td>68648-82-8</td>
<td>10 - 20</td>
<td>N. AP.</td>
<td>N. AP.</td>
<td>N. AP.</td>
<td>N. AP.</td>
<td>N. AP.</td>
<td>N. AP.</td>
<td>N. AP.</td>
<td></td>
</tr>
<tr>
<td>Tetrahydrofuran (THF)</td>
<td>109-99-9</td>
<td>50 - 70</td>
<td>50 PPM</td>
<td>100 PPM</td>
<td>200 PPM</td>
<td>250 PPM</td>
<td>Oral: 2880 mg/kg (rat)</td>
<td>Inhalation 3 hrs.</td>
<td>50 PPM</td>
<td>75 PPM</td>
</tr>
<tr>
<td>Methyl Ethyl Ketone (MEK)</td>
<td>78-93-3</td>
<td>2 - 10</td>
<td>200 PPM</td>
<td>300 PPM</td>
<td>200 PPM</td>
<td>300 PPM</td>
<td>Oral: 3.98 g/kg (rat)</td>
<td>Inhalation 4 hrs.</td>
<td>Dermal: 8-10 mg/kg (rabbit)</td>
<td>4000 PPM (rat)</td>
</tr>
<tr>
<td>Cyclohexanone</td>
<td>108-94-1</td>
<td>5 - 15</td>
<td>20 PPM Skin</td>
<td>50 PPM</td>
<td>Oral: 1900 mg/kg (rat)</td>
<td>Inhalation LCLO</td>
<td>Dermal: 1.0 mg/kg (rabbit)</td>
<td>4 hrs: 21,000 PPM (rat)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

All of the constituents of IPEX adhesive products are either listed on the TSCA inventory of chemical substances maintained by the US EPA and the Canadian Domestic Substance List or are exempt therefrom.

TDG INFORMATION

TDG CLASS: FLAMMABLE LIQUID 3
SHIPPING NAME: ADHESIVE (TETRAHYDROFURAN)
UN NUMBER: 1133, PG II

WHMIS CLASSIFICATION: CONTROLLED PRODUCT
CLASS B, DIVISION 2
CLASS D, DIVISION 2

PH INFORMATION
B = Eye, Hand/Skin (for normal solvent-welding activities)
H = Eye, Hand/Skin, Respiratory Protection and Impermeable Apron (splash/immersion risks)

SECTION III - PHYSICAL DATA

APPEARANCE
Orange, heavy syrupy liquid

ODOR
Ethereal (Threshold = 2-50 PPM)

BOILING POINT (°F/°C)
151°F (67°C)

FREEZING POINT
-108.5°C (-163°F)

SPECIFIC GRAVITY @ 73°F ± 3.6° (23°C ± 2°)
Typical 0.980 ± 0.040

VAPOUR PRESSURE (mm Hg.)
143 mm Hg. based on first boiling component, THF @ 68°F (20°C)

PERCENT VOLATILE BY VOLUME (%)
Approx: 70 - 85%

VAPOR DENSITY (Air = 1)
2.49

EVAPORATION RATE (BUAC = 1)
> 1.0

SOLUBILITY IN WATER
Solvent portion completely soluble in water. Resin portion separates out.

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

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

AUTO IGNITION TEMP.
609.8°F (321°C), THF

FLAMMABLE LIMITS
LEL
UEL
(PERCENT BY VOLUME)
2.0
11.8

FIRE EXTINGUISHING MEDIA

Ansul "Purple K" potassium bicarbonate dry chemical, any appropriately sized ABC dry chemical, carbon dioxide or foam extinguisher can be used for small fires.

Use of a water fog by trained personnel can extinguish small/large fires.

SPECIAL FIRE FIGHTING PROCEDURES

Evacuate enclosed areas. Stay upwind. Full protective equipment, including self-contained breathing apparatus, is recommended. Use of water fog by trained personnel can avoid water flow or water streams distributing burning material or contaminated water over a large area or into sewers or storm drains. Use water spray to cool containers exposed to heat, to flush spills from source of ignition and to disperse vapors. Fight fires from a safe distance or protected area.

UNUSUAL FIRE AND EXPLOSION HAZARDS

SENSITIVITY TO MECHANICAL IMPACT: N. AP
SENSITIVITY TO STATIC DISCHARGE: 0.25 Millijoules

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 ground or lower level(s) and flash back.
SECTION V - HEALTH HAZARD DATA

**PRIMARY ROUTES OF ENTRY:**
- **Inhalation:** X
- **Skin Contact:** X
- **Eye Contact:** Insert
- **Ingestion:** Insert

**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.

**REPRODUCtIVE EFFECTS**
- **Teratogenicity:** N. AP.
- **Mutagenicity:** N. AP.
- **Embryotoxicity:** N. AP.
- **Sensitization to Product:** N. AP.
- **Synergistic Products:** N. AP.

**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.
- 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:** Insert
- **Stable:** Insert

**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 off carbon monoxide, carbon dioxide, hydrogen chloride and smoke.

**HAZARDOUS POLYMERIZATION**
- **May Occur:** Insert
- **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. Empty containers should be air dried before disposing. Hazardous Waste Code: 214.

**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**

**RESPIRATORY PROTECTION (Specify type)**
- Atmospheric levels should be maintained below established exposure limits contained in Section II. If airborne concentrations exceed those limits, use of a NIOSH approved organic vapor cartridge respirator with full face-piece is recommended. The effectiveness of an air purifying respirator is limited. Use it only for a single short-term exposure. For emergency and other conditions where short-term exposure guidelines may be exceeded, use an approved positive pressure self-contained breathing apparatus.

**VENTILATION**
- Use only with adequate ventilation. Provide sufficient ventilation in volume and pattern to keep contaminants below applicable exposure limits set forth in Section II. Use only explosion proof ventilation equipment.

**PROTECTIVE GLOVES**
- PVA coated rubber gloves for frequent dipping/immersion. Use of latex/nitrile surgical gloves or solvent resistant barrier creme should provide adequate protection when normal solvent-cement welding practices and procedures are used for making plastic welded pipe joints.

**EYE PROTECTION**
- Splashproof chemical goggles, face shield, safety glasses with brow guards and side shields, etc. as appropriate for exposure.

**OTHER PROTECTIVE EQUIPMENT AND HYGIENIC PRACTICES**
- Impervious apron and a source of running water to flush or wash the eyes and skin in case of contact.

**SECTION IX - SPECIAL PRECAUTIONS**

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING**
- Store in the shade between 40°F - 90°F (5°C - 32.5°C). Keep away from heat, sparks, open flame and other sources of ignition. Avoid prolonged breathing of vapor. Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Train employees on all special handling procedures before they work with this product.

**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.

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof.