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## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: **FL-20 PRIMER**  
Stock No.: 15985  
Manufacturer Name: ITW Devcon  
Address: 30 Endicott Street  
Danvers, MA 01923  
MSDS Revision Date: 10/10/2006  
Emergency telephone number (800) 424-9300

### HMIS

Health Hazard	3*
Fire Hazard	3
REACTIVITY	1
Personal Protection	X

\* Chronic Health Effects:

In the US, call CHEMTREC: (800) 424-9300

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## SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	
Ethyl acetate	141-78-6	60 - 100 by Weight
Higher oligimers of methane diisocyanate (MDI)	9016-87-9	1 - 5 by Weight
4,4'-Diphenylmethane diisocyanate	101-68-8	1 - 5 by Weight

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## SECTION 3: HAZARDS IDENTIFICATION

Emergency Overview: WARNING! Flammable. Potential Sensitizer Irritant.

Primary Routes of Exposure: Eyes. Skin. Inhalation. Ingestion.

Potential Health Effects:

**Eye Contact:** Can cause moderate irritation, burning sensation, tearing, redness, and swelling. Overexposure may cause lacrimation, conjunctivitis, corneal damage and permanent injury.

**Skin Contact:** Can cause skin irritation; itching, redness, rashes, hives, burning, and swelling. Allergic reactions are possible. May cause skin sensitization, an allergic reaction, which becomes evident on reexposure to this material.

**Inhalation:** Respiratory tract irritant. High concentration may cause dizziness, headache, and anesthetic effects. May cause respiratory sensitization with asthma-like symptoms in susceptible individuals.

**Ingestion:** Causes irritation, a burning sensation of the mouth, throat and gastrointestinal tract and abdominal pain.

**Chronic Health Effects:** Prolonged skin contact may lead to burning associated with severe reddening, swelling, and possible tissue destruction

**Signs/Symptoms:** Overexposure can cause headaches, dizziness, nausea, and vomiting.

**Target Organs:** Eyes. Skin. Respiratory system. Digestive system.

**Aggravation of Pre-Existing Conditions:** Individuals with pre-existing skin disorders, asthma, allergies or known sensitization may be more susceptible to the effects of this product. Isocyanate exposure levels must be monitored. Medical supervision of all employees who handle or come in contact with isocyanates is recommended (i.e.

FEV, FVC). This should include pre-employment and periodic medical examinations.  
Persons with asthmatic-type conditions, chronic bronchitis, other chronic respiratory diseases, recurrent skin eczema or sensitization should be excluded from working with this product. Once sensitized no further exposure can be permitted.

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## SECTION 4: FIRST AID MEASURES

<b>Eye Contact:</b>	Immediately flush eyes with plenty of water for at least 15 to 20 minutes. Ensure adequate flushing of the eyes by separating the eyelids with fingers. Get immediate medical attention.
<b>Skin Contact:</b>	Immediately wash skin with plenty of soap and water for 15 to 20 minutes, while removing contaminated clothing and shoes. Get medical attention if irritation develops or persists.
<b>Inhalation:</b>	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
<b>Ingestion:</b>	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.
<b>Other First Aid:</b>	Due to possible aspiration into the lungs, DO NOT induce vomiting if ingested. Provide a glass of water to dilute the material in the stomach. If vomiting occurs naturally, have the person lean forward to reduce the risk of aspiration.
<b>Note to Physicians:</b>	Asthmatic type symptoms may develop, which may be immediate or delayed for several hours.

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## SECTION 5: FIRE FIGHTING MEASURES

<b>Flammable Properties :</b>	Flammable. Flammable liquid. Class I B.
<b>Auto Ignition Temp :</b>	Not determined.
<b>Flash Point:</b>	24°F (-4.4°C)
<b>Flash Point Method:</b>	Tag closed cup (TCC)
<b>Lower Explosive Limit (LEL)</b>	2%
<b>Upper Explosive Limit (UEL)</b>	11%
<b>Extinguishing Media:</b>	Use carbon dioxide (CO <sub>2</sub> ) or dry chemical when fighting fires involving this material.
<b>Protective Equipment:</b>	As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.
<b>Fire Fighting Instructions:</b>	Evacuate area of unprotected personnel. Use cold water spray to cool fire exposed containers to minimize risk of rupture. Do not enter confined fire space without full protective gear. If possible, contain fire run-off water.
<b>Unsuitable Media:</b>	Water may cause frothing.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions:</b>	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.
<b>Spill Cleanup Measures:</b>	Absorb spill with inert material (e.g., dry sand or earth), then place in a chemical waste container. Provide ventilation. Collect spill with a non-sparking tool. Place into a suitable container for disposal. Clean up spills immediately observing precautions in the protective equipment section. Neutralize residue with appropriate neutralizer. Do not attempt to neutralize large quantities of material unless measures to control reactivity and heat generation have been taken. After removal, flush spill area with soap and water to remove trace residue. Flammable, eliminate ignition sources. Vapors can form an ignitable mixture with air. Vapors can flow along surfaces to distant ignition sources and flash back. Ventilate area. Use proper personal protective equipment as listed in section 8. A blanket of protein foam may be placed over spill for temporary control of isocyanate vapor.
<b>Environmental Precautions:</b>	Avoid runoff into storm sewers, ditches, and waterways.
<b>Other Precautions:</b>	Pump large quantities into closed but not sealed metal containers. Isocyanates will react with water and generate carbon dioxide, this could result in the rupture of any closed containers. Neutralize using 10 parts neutralizer to 1 part isocyanate solution. Mix and allow to stand for 48 hrs in containers, letting evolved carbon dioxide to vent. Neutralizer consist of 90% water, 3-8% concentrated ammonia (or sodium carbonate), 2% detergent.

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## SECTION 7: HANDLING AND STORAGE

<b>Handling:</b>	Use with adequate ventilation. Avoid breathing vapor, aerosol or mist. Material will accumulate static charges which may cause an electrical spark (ignition source). Use proper grounding procedures. Do not reuse containers without proper cleaning or reconditioning.
<b>Storage:</b>	Store in a cool, dry, well ventilated area away from sources of heat, combustible materials, direct sunlight, and incompatible substances. Keep container tightly closed when not in use. Do not reseal container if moisture or water contamination is suspected. Water contaminated material in a sealed container may rupture due to pressure buildup.
<b>Hygiene Practices:</b>	Wash thoroughly after handling.
<b>Special Handling Procedures:</b>	Provide appropriate ventilation/respiratory protection against decomposition products (see Section 10) during welding/flame cutting operations and to protect against dust during sanding/grinding of cured product. Hazardous liquid or vapor residue may remain in emptied container. Do not reuse, heat, burn, pressurize, cut, weld, braze, solder, drill, grind, expose to sparks, flame, or ignition sources of empty containers without proper commercial cleaning or reconditioning.

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## SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

<b>Engineering Controls:</b>	Use appropriate engineering control such as process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits. Good general ventilation should be sufficient to control airborne levels. Where such systems are not effective wear suitable personal protective equipment, which performs satisfactorily and meets OSHA or other recognized standards. Consult with local procedures for selection, training, inspection and maintenance of the personal protective equipment.
<b>Skin Protection Description:</b>	Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.
<b>Eye/Face Protection:</b>	Wear appropriate protective glasses or splash goggles as described by 29 CFR 1910.133, OSHA eye and face protection regulation, or the European standard EN 166.
<b>Respiratory Protection:</b>	A NIOSH approved air-purifying respirator with an organic vapor cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.
<b>Other Protective:</b>	Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.

### **Ethyl acetate:**

Guideline ACGIH : ACGIH TLV-TWA 400 ppm

Guideline OSHA : OSHA PEL-TWA 400 ppm

### **4,4'-Diphenylmethane diisocyanate:**

Guideline ACGIH : ACGIH TLV-TWA 0.005 ppm

Guideline OSHA : OSHA PEL-STEL 0.02 ppm Ceiling/Peak

Notes : Only established PEL and TLV values for the ingredients are listed below.

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical State/Appearance:</b>	Liquid.
<b>Color:</b>	Mobile Orange.
<b>Odor:</b>	Solvent.
<b>Boiling Point:</b>	172°F (77.7°C)
<b>Melting / Freezing Point :</b>	Not determined.
<b>Solubility:</b>	moderately soluble
<b>Specific Gravity:</b>	0.91
<b>pH:</b>	7 @ 5 Percent Solution
<b>Vapor Density:</b>	3.0 (air = 1)
<b>Vapor Pressure:</b>	86 mmHg @68°F
<b>Molecular Formula:</b>	Mixture
<b>Molecular Weight:</b>	Mixture
<b>Percent Volatile:</b>	95
<b>VOC Data :</b>	860 g/L
<b>Percent Solids by Weight</b>	5

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## SECTION 10: STABILITY AND REACTIVITY

<b>Chemical Stability:</b>	Stable under normal temperatures and pressures.
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Conditions to Avoid:	Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions. Moisture and extended exposure over 85 F.
Incompatibilities with Other Materials:	Alcohols, amines, strong bases (alkali, ammonia), acids, metal compounds, moisture or water. Resin reacts with water to give off carbon dioxide.
Hazardous Polymerization:	Polymerization may occur under certain conditions.

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## SECTION 11: TOXICOLOGICAL INFORMATION

### Ethyl acetate:

Eye Effect:	Eye - Human Standard Draize Test : 400 ppm(RTECS)
Skin Effects:	Skin - Rabbit LD50: >20 mL/kg - [Details of toxic effects not reported other than lethal dose value ](RTECS)
Inhalation Effects:	Inhalation - Rat LC50: 200 gm/m <sup>3</sup> - [Behavioral - somnolence (general depressed activity) Lungs, Thorax, or Respiration - acute pulmonary edema Gastrointestinal - changes in structure or function of salivary glands ] (RTECS) Inhalation - Mouse LC50: 45 gm/m <sup>3</sup> /2H - [Details of toxic effects not reported other than lethal dose value] (RTECS)
Ingestion Effects:	Oral - Rat LD50: 5620 mg/kg - [Details of toxic effects not reported other than lethal dose value ] (RTECS) Oral - Mouse LD50: 4100 mg/kg - [oral - somnolence (general depressed activity) oral - changes in motor activity (specific assay) oral - coma ] (RTECS)

### Higher oligimers of methane diisocyanate (MDI):

Eye Effect:	Eye - Rabbit Standard Draize Test: 100 mg - [mild](RTECS)
Skin Effects:	Skin - Rabbit LD50: >9400 mg/kg - [Details of toxic effects not reported other than lethal dose value](RTECS)
Inhalation Effects:	Inhalation - Rat LC50: 490 mg/m <sup>3</sup> /4H - [Sense Organs and Special Senses (Eye) - effect, not otherwise specified Lungs, Thorax, or Respiration - respiratory depression Blood - hemorrhage] (RTECS)
Ingestion Effects:	Oral - Rat LD50: 49 gm/kg - [oral - somnolence (general depressed activity) Gastrointestinal - hypermotility, diarrhea Nutritional and Gross Metabolic - body rat decrease] (RTECS)

### 4,4'-Diphenylmethane diisocyanate:

Eye Effect:	Eye - Rabbit Standard Draize Test : 100 mg - [Moderate ](RTECS)
Skin Effects:	Skin - Rabbit Standard Draize Test : 500 mg/24H(RTECS)
Inhalation Effects:	Inhalation - Rat LC50: 178 mg/m <sup>3</sup> - [Details of toxic effects not reported other than lethal dose value] (RTECS)
Ingestion Effects:	Oral - Rat LD50: 9200 mg/kg - [oral - somnolence (general depressed activity) oral - ataxia Nutritional and Gross Metabolic - body rat decrease ] (RTECS) Oral - Mouse LD50: 2200 mg/kg - [Details of toxic effects not reported other than lethal dose value ] (RTECS)

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## SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity:	No ecotoxicity data was found for the product.
Environmental Fate:	No environmental information found for this product.

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## SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal:	Consult with the US EPA Guidelines listed in 40 CFR Part 261.3 for the classifications of hazardous waste prior to disposal. Furthermore, consult with your state and local waste requirements or guidelines, if applicable, to ensure compliance. Arrange disposal in accordance to the EPA and/or state and local guidelines.
RCRA Number :	D001, D009
Important Disposal Information:	DANGER! Rags, steel wool and waste soaked with this product may spontaneously catch fire if improperly discarded or stored. To avoid a spontaneous combustion fire, immediately after use, place rags, steel wool or waste in a sealed, water-filled, metal con

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## SECTION 14: TRANSPORT INFORMATION

DOT Shipping Name:	Ethyl acetate solution
DOT UN Number:	1173
DOT Hazard Class:	3
DOT Packing Group:	II
DOT Exemption	ORM-D Small quantity exemption

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## SECTION 15: REGULATORY INFORMATION

### WHMIS Pictograms



#### **Ethyl acetate:**

TSCA Inventory Status Listed  
State: Listed in the State of Massachusetts Hazardous Substance List.  
Listed in the Pennsylvania State Hazardous Substances List.  
EC Num : 607-022-00-5

#### **Higher oligimers of methane diisocyanate (MDI):**

TSCA Inventory Status Listed  
State: Listed in the New Jersey State Right to Know List.  
EC Num : 615-005-01-6

#### **4,4'-Diphenylmethane diisocyanate:**

TSCA Inventory Status Listed  
State: Listed in the State of Massachusetts Hazardous Substance List.  
Listed in the New Jersey State Right to Know List.  
Listed in the Pennsylvania State Hazardous Substances List.  
EC Num : 615-005-00-9  
Canadian Regulations. WHMIS Hazard Class(es): B2; D2B; D2A  
All components of this product are on the Canadian Domestic Substances List.

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## SECTION 16: ADDITIONAL INFORMATION

HMIS Health Hazard: 3\*  
HMIS Fire Hazard: 3  
HMIS Reactivity: 1  
HMIS Personal Protection: X  
MSDS Revision Date: 10/10/2006  
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