SAFETY DATA SHEET

SECTION 1 : IDENTIFICATION

Product identifier used on the label:

Product Name:	**FL-20 PRIMER**
Stock No.:	15985

Other means of identification:

Recommended use of the chemical and restrictions on use:

Chemical manufacturer address and telephone number:

Manufacturer Name:	ITW Polymers Adhesives, North America
Address:	30 Endicott Street Danvers, MA 01923
General Phone Number:	(978) 777-1100

Emergency phone number:

Emergency Phone Number:	(800) 424-9300
CHEMTREC:	For emergencies in the US, call CHEMTREC: 800-424-9300

SECTION 2 : HAZARD(S) IDENTIFICATION

Classification of the chemical in accordance with CFR 1910.1200(d)(f):

GHS Pictograms:

Signal Word: DANGER.

GHS Class:
Flammable Liquid. Category 2.
Respiratory sensitisation. Category 1.
Specific Target Organ Toxicity -STOT Repeated exposure RE. Category 2 (Inhalation,respiratory system).
Skin Sensitization. Category 1.
Acute Inhalation Toxicity. Category 4.

Hazard Statements:
H225 - Highly flammable liquid and vapor.
H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H373 - May cause damage to organs through prolonged or repeated exposure.
H317 - May cause an allergic skin reaction.
H332 - Harmful if inhaled.

Precautionary Statements:
P210 - Keep away from heat/sparks/open flames/hotsurfaces. — No smoking.
P233 - Keep container tightly closed.
P240 - Ground/Bond container and receiving equipment.
P241 - Use explosion-proof electrical/ventilating/lighting equipment.
P242 - Use only non-sparking tools.
P243 - Take precautionary measures against static discharge.
P260 - Do not breathe dust/fume/gas/mist/vapours/spray.
P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P271 - Use only outdoors or in a well-ventilated area.
P272 - Contaminated work clothing should not be allowed out of the workplace.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
P284 - In case of inadequate ventilation wear respiratory protection.
P302+P352 - IF ON SKIN: Wash with plenty of water.
P303+P361+P353 - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 - Call a POISON CENTER or doctor/physician if you feel unwell.
P314 - Get medical advice/attention if you feel unwell.
P321 - Specific treatment (see ... on this label).
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P370+P378 - In case of fire: Use dry chemical, carbon dioxide to extinguish small fires. Use water for large fires.
P403+P235 - Store in a well-ventilated place. Keep cool.
P501 - Dispose of contents/container in accordance with Local, State, Federal and Provincial regulations.

Hazards not otherwise classified that have been identified during the classification process:

Route of Exposure: Eyes. Skin. Inhalation. Ingestion.

Potential Health Effects:

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

Skin:	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.
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.

SECTION 3 : COMPOSITION/INFORMATION ON INGREDIENTS

Mixtures:

Chemical Name	CAS#	Ingredient Percent	EC Num.
Ethyl acetate	141-78-6	90 - 100 by weight	
4,4'-Diphenylmethane diisocyanate	101-68-8	1 - 10 by weight	
Higher oligimers of methane diisocyanate (MDI)	9016-87-9	1 - 10 by weight	
Proprietary ingredient(s)	Trade Secret	0.1 - 1.0 by weight	

SECTION 4 : FIRST AID MEASURES

Description of necessary measures:

Eye Contact:	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.
Skin Contact:	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.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.
Ingestion:	If swallowed, do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

Most important symptoms/effects, acute and delayed:

Other First Aid:	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.

Indication of immediate medical attention and special treatment needed:

Note to Physicians:	Asthmatic type symptoms may develop, which may be immediate or delayed for several hours.

SECTION 5 : FIRE FIGHTING MEASURES

Suitable and unsuitable extinguishing media:

Suitable Extinguishing Media:	Use carbon dioxide (CO_2) or dry chemical when fighting fires involving this material.
Unsuitable extinguishing media:	Water may cause frothing.
Unusual Fire Hazards:	Do not reseal containers if contaminated with water, resin will react with water to release carbon dioxide. As a result of the water contamination, pressure will build up in the sealed container causing it to rupture.

Special protective equipment and precautions for fire-fighters:

Protective Equipment:	As in any fire, wear Self-Contained Breathing Apparatus (SCBA), MSHA/NIOSH (approved or equivalent) and full protective gear.
Fire Fighting Instructions:	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.

SECTION 6 : ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Personal Precautions:	Evacuate area and keep unnecessary and unprotected personnel from entering the spill area.

Environmental precautions:

Environmental Precautions:	Avoid runoff into storm sewers, ditches, and waterways.

Methods and materials for containment and cleaning up:

Spill Cleanup Measures:	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.

Reference to other sections:

Other Precautions:	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.

SECTION 7 : HANDLING and STORAGE

Precautions for safe handling:

Handling:	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.
Hygiene Practices:	Wash thoroughly after handling.
Special Handling Procedures:	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.

Conditions for safe storage, including any incompatibilities:

Storage:	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.

SECTION 8: EXPOSURE CONTROLS, PERSONAL PROTECTION

EXPOSURE GUIDELINES:

Ethyl acetate :

Guideline ACGIH:	TLV-TWA: 400 ppm
Guideline OSHA:	PEL-TWA: 400 ppm

4,4'-Diphenylmethane diisocyanate :

Guideline ACGIH:	TLV-TWA: 0.005 ppm
Guideline OSHA:	PEL-Ceiling/Peak: 0.02 ppm

Appropriate engineering controls:

Engineering Controls:	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.

Individual protection measures:

Eye/Face Protection:	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.
Skin Protection Description:	Wear appropriate protective gloves and other protective apparel to prevent skin contact. Consult manufacturer's data for permeability data.
Respiratory Protection:	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.
Other Protective:	Facilities storing or utilizing this material should be equipped with an eyewash and a deluge shower safety station.
Notes :	Only established PEL and TLV values for the ingredients are listed.

SECTION 9 : PHYSICAL and CHEMICAL PROPERTIES

PHYSICAL AND CHEMICAL PROPERTIES:

Physical State Appearance:	Liquid.
Color:	Mobile Orange.
Odor:	Solvent.
Boiling Point:	172°F (77.7°C)
Melting Point:	Not determined.
Specific Gravity:	0.91
Solubility:	moderately soluble.
Vapor Density:	3.0 (air = 1)
Vapor Pressure:	86 mmHg @68°F
Percent Volatile:	95
Evaporation Rate:	4.1 (butyl acetate = 1)
pH:	7 @ 5 Percent Solution
Molecular Formula:	Mixture
Molecular Weight:	Mixture
Flash Point:	24°F (-4.4°C)
Flash Point Method:	Tag closed cup. (TCC)
Lower Flammable/Explosive Limit:	2%
Upper Flammable/Explosive Limit:	11%
Auto Ignition Temperature:	Not determined.
VOC Content:	860 g/L

9.2. Other information:

Percent Solids by Weight	5

SECTION 10 : STABILITY and REACTIVITY

Chemical Stability:

Chemical Stability:	Stable under normal temperatures and pressures.

Possibility of hazardous reactions:

Hazardous Polymerization:	Polymerization may occur under certain conditions.

Conditions To Avoid:

Conditions to Avoid:	Extreme heat, sparks, and open flame. Incompatible materials, oxidizers and oxidizing conditions. Moisture and extended exposure over 85 F.

Incompatible Materials:

Incompatible Materials:	Alcohols, amines, strong bases (alkali, ammonia), acids, metal compounds, moisture or water. Resin reacts with water to give off carbon dioxide.

SECTION 11 : TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:

Ethyl acetate :

Skin:	Administration onto the skin - Rabbit LD50 - Lethal dose, 50 percent kill: >20 mL/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)
Inhalation:	Inhalation - Rat LC50 - Lethal concentration, 50 percent kill: 200 gm/m3 [Behavioral - Somnolence (general depressed activity) Lungs, Thorax, or Respiration - Acute pulmonary edema Gastrointestinal - Changes in structure or function of salivary glands] Inhalation - Rat LC50 - Lethal concentration, 50 percent kill: 1600 ppm/8H [Details of toxic effects not reported other than lethal dose value] Inhalation - Rat LC50 - Lethal concentration, 50 percent kill: >6000 ppm/6H [Details of toxic effects not reported other than lethal dose value] (RTECS)
Ingestion:	Oral - Rat LD50 - Lethal dose, 50 percent kill: 5620 mg/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)

4,4'-Diphenylmethane diisocyanate :

Eye:	Administration into the eye - Rabbit Standard Draize test: 100 mg [Moderate] (RTECS)
Inhalation:	Inhalation - Rat LC50 - Lethal concentration, 50 percent kill: 178 mg/m3 [Details of toxic effects not reported other than lethal dose value] (RTECS)
Ingestion:	Oral - Rat LD50 - Lethal dose, 50 percent kill: 9200 mg/kg [Behavioral - Somnolence (general depressed activity) Behavioral - Ataxia Nutritional and Gross Metabolic - Body temperature decrease] (RTECS)

Higher oligimers of methane diisocyanate (MDI) :

Eye:	Administration into the eye - Rabbit Standard Draize test: 100 mg [Mild] (RTECS)
Skin:	Administration onto the skin - Rabbit LD50 - Lethal dose, 50 percent kill: >9400 mg/kg [Details of toxic effects not reported other than lethal dose value] (RTECS)
Inhalation:	Inhalation - Rat LC50 - Lethal concentration, 50 percent kill: 490 mg/m3/4H [Sense Organs and Special Senses (Eye) - effect, not otherwise specified Lungs, Thorax, or Respiration - Respiratory depression Blood - Hemorrhage] (RTECS)
Ingestion:	Oral - Rat LD50 - Lethal dose, 50 percent kill: 49 gm/kg [Behavioral - Somnolence (general depressed activity) Gastrointestinal - Hypermotility, diarrhea Nutritional and Gross Metabolic - Body temperature decrease] (RTECS)

SECTION 12 : ECOLOGICAL INFORMATION

Ecotoxicity:

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

SECTION 13 : DISPOSAL CONSIDERATIONS

Description of waste:

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 container.

SECTION 14 : TRANSPORT INFORMATION

DOT Shipping Name:	Refer to Bill of Lading
DOT UN Number:	Refer to Bill of Lading

SECTION 15 : REGULATORY INFORMATION

Safety, health and environmental regulations specific for the product:

Ethyl acetate :

TSCA Inventory Status:	Listed
Canada DSL:	Listed

4,4'-Diphenylmethane diisocyanate :

TSCA Inventory Status:	Listed
Section 313:	EPCRA - 40 CFR Part 372 - (SARA Title III) Section 313 Listed Chemical.
Canada DSL:	Listed

Higher oligimers of methane diisocyanate (MDI) :

TSCA Inventory Status:	Listed
Section 313:	EPCRA - 40 CFR Part 372 - (SARA Title III) Section 313 Listed Chemical.
Canada DSL:	Listed
Canadian Regulations.	WHMIS Hazard Class(es): B2; D2B; D2A All components of this product are on the Canadian Domestic Substances List.
WHMIS Pictograms:	

SECTION 16 : ADDITIONAL INFORMATION

HMIS Ratings:

HMIS Health Hazard:	3*
HMIS Fire Hazard:	3
HMIS Reactivity:	1
HMIS Personal Protection:	X

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

* Chronic Health Effects

SDS Revision Date:	July 29, 2015

MSDS Revision Notes:	"GHS Update"
SDS Format:	
MSDS Author:	Actio Corporation
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