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American Recycling Center, Inc  
655 Wabassee Dr.  
Owosso, MI 48867  
Phone: 989-725-5100  
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Manufacturer Details:  
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**SAFETY DATA SHEET**  
**FX 1118 Aromatic Polyurethane Binder**

**02/07/2023**

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

1.1. Product identifier

Product name: FX 1118  
Material Type: Isocyanate  
Product Material Weight: 45 lbs Pail / 475 lbs Drums

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses: Pour In Place Adhesive / Binder

1.3. Details of the supplier of the safety data sheet:

Supplier: American Recycling Center, Inc.  
655 Wabassee Drive  
Owosso, MI 48867

1.4. Emergency telephone number

**24-Hour Emergency Phone number – 800-424-9300**  
**Customer Information Center: 989-725-5100**

**SECTION 2: HAZARDS IDENTIFICATION**

2.1. Classification of the substance or mixture

**Classification**

Physical hazards	Not Classified
Health hazards	Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Resp. Sens. 1 - H334 Skin Sens. 1- H317 Carc. 2 - H351 STOT SE 3 - H335 STOT RE 2 - H373
Environmental hazards	Not Classified

2.2. Label elements

Pictogram



Signal word: Danger

Hazard statements H315 Causes skin irritation.

H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335 May cause respiratory irritation.  
H351 Suspected of causing cancer.  
H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P260 Do not breathe vapor/spray.



P264 Wash contaminated skin thoroughly after handling.  
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.  
P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P308+P313 IF exposed or concerned: Get medical advice/attention.  
P314 Get medical advice/attention if you feel unwell.  
P501 Dispose of contents/container in accordance with national regulations.

Contains 4,4'-methylenediphenyl diisocyanate

Supplementary precautionary statements

P202 Do not handle until all safety precautions have been read and understood.  
P272 Contaminated work clothing should not be allowed out of the workplace  
P403+P233 Store in a well-ventilated place. Keep container tightly closed.

### 2.3. Other hazards

## **SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

### 3.2. Mixtures

DIPHENYLMETHANE-4,4'-DI-ISOCYANATE 30-60%

CAS-No.: 101-68-8 EC No.: 202-966-0

Classification

Acute Tox. 4 - H332

Skin Irrit. 2 - H315

Eye Irrit. 2 - H319

Resp. Sens. 1 - H334

Skin Sens. 1 - H317

Carc. 2 - H351

STOT SE 3 - H335

STOT RE 2 - H373

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

## **SECTION 4: FIRST AID MEASURES**

### 4.1. Description of first aid measures

Inhalation

Remove affected person from source of contamination. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. If breathing stops, provide artificial respiration. Show this Safety Data Sheet to the medical personnel.

Ingestion

Rinse mouth thoroughly with water. Stop if the affected person feels sick as vomiting may be dangerous. Do not induce vomiting. Never give anything by mouth to an unconscious person. Get medical attention if a large quantity has been ingested. If in doubt, get medical attention promptly.

Skin contact

It is important to remove the substance from the skin immediately. Wash skin thoroughly with soap and water. Take off contaminated clothing and wash it before reuse. Get medical attention promptly if symptoms occur after washing.

Eye contact

Rinse immediately with plenty of water. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes and get medical attention. Show this Safety Data Sheet to the medical personnel.

Protection of first aiders

First aid personnel should wear appropriate protective equipment during any rescue. Wash contaminated clothing thoroughly with water before removing it from the affected person, or wear gloves.

#### 4.2. Most important symptoms and effects, both acute and delayed

##### Inhalation

LC50 (rat) : ca. 490 mg/m<sup>3</sup> (4 hours) : using experimentally produced respirable aerosol having aerodynamic diameter <5microns. This product is a respiratory irritant and potential respiratory sensitizer: repeated inhalation of vapor or aerosol at levels above the occupational exposure limit could cause respiratory sensitization. Symptoms may include irritation to the eyes, nose, throat and lungs, possibly combined with dryness of the throat, tightness of chest and difficulty in breathing. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentrations of MDI may develop in sensitized persons.

##### Ingestion

May cause discomfort. Gastrointestinal symptoms, including upset stomach. Ingestion may cause severe irritation of the mouth, the esophagus and the gastrointestinal tract.

##### Skin contact

The product is irritating to eyes and skin. May cause skin sensitization or allergic reactions in sensitive individuals.

##### Eye contact

Causes serious eye irritation. May cause serious eye damage.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor: Treat symptomatically.

Specific treatments: In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be under medical surveillance for 48 hours.

### **SECTION 5: FIREFIGHTING MEASURES**

#### 5.1. Extinguishing media

##### Suitable extinguishing media

Use foam, carbon dioxide or dry powder to extinguish.

##### Unsuitable extinguishing media

Water may be used if no other available and then in copious quantities. Reaction between water and hot isocyanate may be vigorous. Prevent washings from entering water courses, keep fire exposed containers cool by spraying with water.

#### 5.2. Special hazards arising from the substance or mixture

##### Specific hazards

Do not get water inside containers, risk of pressure build up

##### Hazardous combustion products

Thermal decomposition or combustion products may include the following substances:  
Toxic gases or vapors. Carbon dioxide (CO<sub>2</sub>). Carbon monoxide (CO). Hydrogen cyanide (HCN).

#### 5.3. Advice for firefighters

##### Special protective equipment for firefighters

Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

### **SECTION 6: ACCIDENTAL RELEASE MEASURES**

#### 6.1. Personal precautions, protective equipment and emergency procedures

##### Personal precautions

No action shall be taken without appropriate training or involving any personal risk. Keep unnecessary and unprotected personnel away from the spillage. Wear protective clothing as described in Section 8 of this safety data sheet. Ensure suitable respiratory protection is worn during removal of spillages in confined areas.

#### 6.2. Environmental precautions

##### Environmental precautions

Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

#### 6.3. Methods and material for containment and cleaning up

##### Methods for cleaning up

Stop leak if safe to do so. If leakage cannot be stopped, evacuate area. To prevent release, place container with damaged side up. Do not touch or walk into spilled material. Provide adequate ventilation. Absorb spillage with non-combustible, absorbent material. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

#### 6.4. Reference to other sections

Reference to other sections for personal protection, see Section 8. For waste disposal, see Section 13.

### **SECTION 7: HANDLING AND STORAGE**

#### 7.1. Precautions for safe handling

##### Usage precautions

Do not handle until all safety precautions have been read and understood. Wear protective clothing as described in Section 8 of this safety data sheet. Avoid contact with skin, eyes and clothing. Do not breathe vapors. Persons already sensitized to diisocyanates may develop allergic reactions when using this product. Use approved respirator if air contamination is above an acceptable level.

**Advice on general occupational hygiene**

Do not eat, drink or smoke when using this product. Good personal hygiene procedures should be implemented. Wash contaminated skin thoroughly after handling. Wash promptly with soap and water if skin becomes contaminated. Remove contaminated clothing and protective equipment before entering eating areas.

**7.2. Conditions for safe storage, including any incompatibilities**

**Storage precautions**

Store in tightly-closed, original container in a dry, cool and well-ventilated place. Keep only in the original container. Store at temperatures not exceeding 25°C.

**Storage class**

Chemical storage.

**7.3. Specific end use(s)**

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**8.1. Control parameters**

**Occupational exposure limits**

Long-term exposure limit (8-hour TWA): WEL 0.02 mg/m<sup>3</sup>  
 Short-term exposure limit (15-minute): WEL 0.07 mg/m<sup>3</sup>

WEL = Workplace Exposure Limit

**8.2. Exposure controls**

**Protective equipment**



**Appropriate engineering controls**

Observe any occupational exposure limits for the product or ingredients. Mechanical ventilation or local exhaust ventilation may be required. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid inhalation of vapors. Ensure control measures are regularly inspected and maintained.

**Eye/face protection**

Wear eye protection. Wear chemical splash goggles. Personal protective equipment for eye and face protection should comply with European Standard EN166.

**Hand protection**

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. Wear protective gloves made of the following material: Nitrile rubber. Polyvinyl chloride (PVC).

**Other skin and body protection**

Wear appropriate clothing to prevent any possibility of skin contact.

**Hygiene measures**

No specific hygiene procedures recommended but good personal hygiene practices should always be observed when working with chemical products. Do not eat, drink or smoke when using this product.

**Respiratory protection**

If ventilation is inadequate, suitable respiratory protection must be worn. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit. Respirator selection must be based on exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**Environmental exposure controls**

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Keep container tightly sealed when not in use.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1. Information on basic physical and chemical properties**

Appearance	Light viscous liquid
Color	Straw. to Brown.
Odor	Slight odor
Flash point	> 200°C CC (Closed cup).
Solubility(ies)	Insoluble in water. Soluble in the following materials: Aromatic solvents.
Auto-ignition temperature	600°C

**9.2. Other information**

**SECTION 10: STABILITY AND REACTIVITY**

10.1. Reactivity

10.2. Chemical stability

Stability

Stable at normal ambient temperatures. Stable when stored in a dry place. Reaction with water (moisture) produces CO2 gas

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions

Reaction with water (moisture) produces CO2-gas. Exothermic reaction with materials containing active hydrogen groups. The reaction becomes progressively more vigorous and can be violent at higher temperatures if the miscibility of the reaction partners is good or is supported by stirring or by the presence of solvents. MDI is insoluble with, and heavier than water and sinks to the bottom but reacts slowly at the interface.

10.4. Conditions to avoid

Conditions to avoid

Avoid excessive heat for prolonged periods of time. Avoid freezing.

10.5. Incompatible materials

Materials to avoid

Water, moisture. Alcohols. Amines. Acids. Alkalis.

10.6. Hazardous decomposition products

Hazardous decomposition products

Heating may generate the following products: Carbon dioxide (CO2). Carbon monoxide (CO). Hydrogen cyanide (HCN). Nitrous gases (NOx).

**SECTION 11: TOXICOLOGICAL INFORMATION**

11.1. Information on toxicological effects

**Acute toxicity - inhalation**

ATE inhalation (dusts/mists mg/l) 4.29

**Serious eye damage/irritation**

Serious eye damage/irritation Slightly irritating.

**Respiratory sensitization**

Respiratory sensitization There is evidence that the product can cause respiratory hypersensitivity. LC50 (rat) : ca. 490 mg/m<sup>3</sup> (4 hours) : using experimentally produced respirable aerosol having aerodynamic diameter <5microns. This product is a respiratory irritant and potential respiratory sensitizer: repeated inhalation of vapor or aerosol at levels above the occupational exposure limit could cause respiratory sensitization. Symptoms may include irritation to the eyes, nose, throat and lungs, possibly combined with dryness of the throat, tightness of chest and difficulty in breathing. The onset of the respiratory symptoms may be delayed for several hours after exposure. A hyper-reactive response to even minimal concentrations of MDI may develop in sensitized persons.

**Skin sensitisation**

Skin sensitization Epidemiological studies have shown evidence of skin sensitization. Animal studies have shown that respiratory sensitization can be induced by skin contact with known respiratory sensitizers including diisocyanates. These results emphasize the need for protective clothing including gloves to be worn at all times when handling these chemicals or in maintenance work.

**Carcinogenicity**

Carcinogenicity Rats have been exposed for two years to a respirable aerosol of polymeric MDI which resulted in chronic pulmonary irritation at high concentrations. Only at the top level (6 mg/m<sup>3</sup>), there was a significant incidence of a benign tumor of the lung (adenoma) and one malignant tumor (adenocarcinoma). There were no lung tumors at 1 mg/m<sup>3</sup> and no effects at 0.2 mg/m<sup>3</sup>. Overall, the tumor incidence, both benign and malignant, and the number of animals with the tumors were not different from controls. The increased incidence of lung tumors is associated with prolonged respiratory irritation and the concurrent accumulation of yellow material in the lung, which occurred throughout the study. In the absence of prolonged exposure to high concentrations leading to chronic irritation and lung damage, it is highly unlikely that tumor formation will occur.

**Inhalation**

The product contains a sensitizing substance.

**Ingestion**

May cause discomfort if swallowed. Gastrointestinal symptoms, including upset stomach.

**Skin contact**

Irritating to skin. May cause sensitization by skin contact.

**Eye contact**

Causes eye irritation.

**SECTION 12: ECOLOGICAL INFORMATION**

Ecotoxicity

The polymer is expected to be of low toxicity.

12.1. Toxicity

12.2. Persistence and degradability

12.3. Bioaccumulative potential

12.4. Mobility in soil

Mobility

By considering the production and use of the substance, it is unlikely that significant environmental exposure in the air or water will arise. Immiscible with water, but will react with water to produce inert and non-biodegradable solids. Conversion to soluble products, including diamino- diphenylmethane (MDA), is very low under the optimal laboratory conditions of good dispersion and low concentration. In air, the predominant degradation process is predicted to be a relatively rapid OH radical attack, by calculation and by analogy with related diisocyanates.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

This product does not contain any substances classified as PBT or vPvB.

12.6. Other adverse effects

**SECTION 13: DISPOSAL CONSIDERATIONS**

13.1. Waste treatment methods

General information

Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

Disposal methods

The generation of waste should be minimized or avoided wherever possible. Dispose of waste product or used containers in accordance with local regulations

**SECTION 14: TRANSPORT INFORMATION**

General

The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, ADR/RID).

14.1. UN number

Not applicable.

14.2. UN proper shipping name

Not applicable.

14.3. Transport hazard class(es)

No transport warning sign required.

14.4. Packing group

Not applicable.

14.5. Environmental hazards

**Environmentally hazardous substance/marine pollutant**

No.

14.6. Special precautions for user

Not applicable.

14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**

Not applicable.

**SECTION 15: REGULATORY INFORMATION**

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

15.2. Chemical safety assessment

**SECTION 16: OTHER INFORMATION**

Hazard statements in full

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H319 Causes serious eye irritation.

H332 Harmful if inhaled.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H335 May cause respiratory irritation.

H351 Suspected of causing cancer.

H373 May cause damage to organs through prolonged or repeated exposure.

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

*American Recycling Center urges each customer or recipient of this SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained*

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*This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.*

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**Department issuing SDS: EH&S Delivery**

**Contact: Customer Service 989-725-5100**  
**02/07/2023**

*The information herein is to assist customers in determining whether our products are suitable for their applications. Our products are intended for sale to industrial and commercial customers. We request that customers inspect and test our products before use and satisfy themselves as to contents and suitability. We warrant that our products will meet our written specifications. Nothing herein shall constitute and other warranty express or implied, including any warranty of merchantability or fitness, nor is protection from any law or patent to be inferred. All patent rights are reserved. The exclusive remedy for all proven claims is replacement of our materials and in no event shall we be liable for special, incidental or consequential damages.*

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