1 Identification of the substance/mixture and the company/undertaking

1.1 Product identifier
Trade name: Edge-Pro Part A

1.2 Application of the substance / the mixture: Polyurea joint filler

1.3 Details of the supplier of the Safety Data Sheet
Manufacturer/Supplier: Metzger/McGuire Co.
P. O. Box 2217
Concord, NH 03302
Telephone: (800) 223-6680

1.4 Emergency telephone number:
ChemTel Inc.
(800) 255-3924, +1 (813) 248-0585

2 Hazards identification

2.1 GHS Classification of the substance or mixture
Acute toxicity (Oral): Category 4
Skin sensitization: Category 1
Acute aquatic toxicity: Category 1
Chronic aquatic toxicity: Category 1

2.2 GHS Label elements
Hazard pictograms/symbols

Signal word: Warning

Hazard statements:
H302 Harmful if swallowed.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements:
P260 Protect skin and eyes from liquid.
P272 Contaminated work clothing should not be allowed out of the workplace.
P270 Do not eat, drink or smoke when using this product.
P273 Avoid release to the environment.
P280 Wear protective gloves.
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.
P333 + P313 IF skin irritation or rash occurs: Get medical advice/attention.
P363 Wash contaminated clothing before reuse.
P391 Collect spillage.

Additional information: May produce an allergic reaction. Very toxic to aquatic organisms; may cause long-term adverse effects in the aquatic environment.

HMIS Rating:
Health: 2
Flammability: 1
Physical Hazard: 0

3 Composition/information on ingredients

3.2 Mixture
Description: Mixture of substances listed below with nonhazardous additions.

Dangerous components:

<table>
<thead>
<tr>
<th>CAS</th>
<th>Substance Name</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>804-79-9</td>
<td>Tetrahydroxypropylethylendiamine</td>
<td>5-10%</td>
</tr>
<tr>
<td>102-60-3</td>
<td>Diethylmethylbenzenediamine</td>
<td>5-15%</td>
</tr>
</tbody>
</table>

4 First aid measures

SECTION 4. FIRST AID MEASURES

If inhaled: If breathed in, move person into fresh air. Oxygen or artificial respiration if needed. In case of skin contact: Take off contaminated clothing and shoes immediately. Wash off with warm water and soap. If skin irritation occurs, seek medical advice/attention. Wash contaminated clothing before re-use. Destroy contaminated shoes.
In case of eye contact: Rinse thoroughly with plenty of water, also under the eyelids. If eye irritation persists, consult a specialist.
If swallowed: Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Obtain medical attention. Never give anything by mouth to an unconscious person.

Notes to physician: The first aid procedure should be established in consultation with the doctor responsible for industrial medicine

5 Firefighting measures

5.1 Extinguishing media

For safety reasons unsuitable extinguishing agents: Water with full jet, Water spray

5.2 Special hazards arising from the substance or mixture: No information available.

5.3 Advice for the firefighters


Additional information: Cool endangered receptacles with water fog or haze. Eliminate all ignition sources if safe to do so.

6 Accidental release measures


6.2 Environmental precautions: Toxic to aquatic life. Should not be released into the environment.

Do not flush into surface water or sanitary sewer system. Prevent from spreading (e.g. by damming–in or oil barriers).

6.3 Methods and material for containment and cleaning up: Absorb liquid components with liquid-binding material. Send for recovery or disposal in suitable receptacles. Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.

7 Handling and storage

7.1 Precautions for safe handling: Handle in accordance with good industrial hygiene and safety practice. Handle and open container with care. Protect from moisture. To avoid thermal decomposition, do not overheat. Use only in area provided with appropriate exhaust ventilation. Avoid inhalation, ingestion and contact with skin and eyes. Wear suitable protective clothing, gloves and eye/face protection. Wash thoroughly after handling. Store in cool, dry place in tightly closed receptacles (60-80°F recommended).

7.2 Conditions for safe storage, including any incompatibilities: Keep containers tightly closed in a dry, cool and well ventilated place. Keep under nitrogen. Keep away from heat and flame.

Further Information about storage conditions: Keep container tightly sealed. Store in an area with adequate ventilation.
Safety Data Sheet

8 Exposure controls/personal protection

8.1 Control parameters
Ingredients with limit values that require monitoring at the workplace: The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

8.2 Engineering controls
Use mechanical ventilation for general area control. Ensure that extracted air cannot be returned to the workplace through the ventilation system. Ensure that eyewash stations and safety showers are close to the workstation location.

8.3 Personal protective equipment
General protective and hygienic measures: Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and at the end of work. Do not inhale gases / fumes / aerosols. Avoid contact with the eyes and skin.

Respiratory protection: Not required under normal conditions of use. Use respirator when performing operations involving potential exposure to vapour of the product.

Hand protection: Protective, impermeable gloves. (Neoprene, PVC, Nitrile rubber) The glove material has to be impermeable and resistant to the product / the substance / the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Eye protection: Safety glasses with side shields. Contact lenses should not be worn.

Skin and Body protection: Protective work clothing. Where potential exposure warrants, rubber or plastic boots and chemically resistant protective suit.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties
General Information
Appearance
Form: Liquid
Colour: Cloudy
Odour: amine-like
Odour threshold: No data available
pH: No data available
Melting point/range: >382 °F / >200 °C
Boiling point/range: >302 °F / >150 °C
Flash point: No data available
Evaporation rate: No data available
Flammability (solid, gaseous): Not applicable
Upper/lower flammability or explosive limit: Not applicable
Vapor pressure: No data available
Vapor density: No data available
Relative Density at 20°C: 1.03 g/cm³
Solubility in / Miscibility with Water: Slightly soluble
Partition coefficient (n-octanol/water): No data available
Auto/Self-ignition temperature: No data available
Decomposition temperature: 1,000 – 3,000 cps

10 Stability and reactivity

10.1 Reactivity: No dangerous reaction known under conditions of normal use.
10.2 Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used and stored according to specifications.
10.3 Possibility of hazardous reactions: Hazardous polymerization does not occur.
10.4 Conditions to avoid: Exposure to moisture. Heat.
10.5 Incompatible materials: Strong acids, bases and oxidizing agents.
10.6 Hazardous decomposition products: Carbon monoxide and carbon dioxide. Nitrogen oxides (NOx) Sulphur oxides.
15 Regulatory Information

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

United States (USA)

SARA

Section 315 (extremely hazardous substances):
None of the ingredients is listed.

Section 313 (Specific toxic chemical listings):
Components above de minimus level: None

TSCA (Toxic Substances Control Act):
All the ingredients are listed.

Proposition 65 (California):
Chemicals known to cause cancer: None

Canada

Canadian Domestic Substances List (DSL):
All ingredients are listed.

Canadian Ingredient Disclosure list (limit 0.1%)
None of the ingredients is listed.

Canadian Ingredient Disclosure list (limit 1%)
None of the ingredients is listed.

15.2 Chemical Safety assessment: A Chemical Safety Assessment has not been carried out.

16 Other information

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.

Abbreviation and acronyms:
ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road
IMDG: International Maritime Code for Dangerous Goods
DOT: US Department of Transportation
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienist.
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substance
CAS: Chemical Abstracts Service (division of the American Chemical Society)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials information System (Canada)
3 Composition/information on ingredients

3.2 Mixture
Description: Mixture of substances listed below with potential nonhazardous additions.

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphényl methane-4,4'-disocyanate</td>
<td>101-68-8</td>
<td>80-100%</td>
</tr>
<tr>
<td>Methylenediphenyl disocyanate</td>
<td>26447-40-5</td>
<td>&lt;5%</td>
</tr>
</tbody>
</table>

4 First aid measures

4.1 Description of first aid measures

General advice:
Remove contaminated clothing.

If inhaled:
Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

If on skin:
Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

If in eyes:
Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

If swallowed:
Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

4.2 Most important symptoms and effects, both acute and delayed:
Symptoms: The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11. Eye irritation, skin irritation, allergic symptoms

Hazard: Symptoms can appear later.

5 Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents:
water spray, dry powder, carbon dioxide, foam

5.2 Specific hazards arising from the substance or mixture:
Hazards during fire-fighting:
nitrous gases, fumes/smoke, isocyanate, vapour

5.3 Advice for the firefighters
Protective equipment:
Firefighters should be equipped with self-contained breathing apparatus and turn-out gear.

Additional information:
Keep containers cool by spraying with water if exposed to fire. Dispose of fire debris and contaminated extinguishing water in accordance with official regulations.

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures:
Clear area. Ensure adequate ventilation. Wear suitable personal protective clothing and equipment.

6.2 Environmental precautions:
Do not discharge into drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up:
For small amounts: Absorb isocyanate with suitable absorbent material (see § 40 CFR, sections 260, 264 and 265 for further information). Shovel into open container. Do not make container pressure tight. Move container to a well-ventilated area (outside). Spill area can be decontaminated with the following recommended decontamination solution: Mixture of 90% water, 8% concentrated ammonia, 2% detergent. Add at a 10 to 1 ratio. Allow to stand for at least 48 hours to allow escape of evolved carbon dioxide.

7 Handling and storage

7.1 Precautions for safe handling:
Provide suitable exhaust ventilation at the processing machines. Ensure thorough ventilation of stores and work areas. Avoid aerosol formation. When handling heated product, vapours of the product should be ventilated, and respiratory protection used. Wear respiratory protection when spraying. Danger of bursting when sealed gastight. Protect against moisture. If bulging of drum occurs, transfer to well ventilated area, puncture to relieve pressure, open vent and let stand for 48 hours before reselling.

Store in cool, dry place in tightly closed receptacles (60-80°F recommended).

7.2 Conditions for safe storage, including any incompatibilities:
Keep away from water. Segregate from foods and animal feeds. Segregate from acids and bases. Segregate from bases.
Safety Data Sheet

Further Information about storage conditions:
Formation of CO2 and build up of pressure possible. Keep container tightly closed and in a well-ventilated place. Outage of containers should be filled with dry inert gas at atmospheric pressure to avoid reaction with moisture.

8 Exposure controls/personal protection

8.1 Control parameters

<table>
<thead>
<tr>
<th>Component</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diphenylmethane-4,4'-diisocyanate (MDI)</td>
<td>0.02 ppm 0.2 mg/m³ ; CLV</td>
<td>TWA value 0.005 ppm ;</td>
</tr>
</tbody>
</table>

8.2 Engineering controls

Provide readily accessible eye wash stations and safety showers.
Provide ventilation adequate to ensure concentrations are minimized.

8.3 Personal protective equipment

General protective and hygienic measures:
Wear protective clothing as necessary to prevent contact. Eye wash fountains and safety showers must be easily accessible. Observe the appropriate PEL or TLV value. Wash soiled clothing immediately. Contaminated equipment or clothing should be cleaned after each use or disposed of.

Respiratory protection:
When workers are facing concentrations above the occupational exposure limits they must use appropriate certified respirators. When atmospheric levels may exceed the occupational exposure limit (PEL or TLV) NIOSH-certified air-purifying respirators equipped with an organic vapor sorbent and particulate filter can be used as long as appropriate precautions and change out schedules are in place. For emergency or non-routine, high exposure situations, including confined space entry, use a NIOSH-certified full facepiece pressure demand self-contained breathing apparatus (SCBA) or a full facepiece pressure demand supplied-air respirator (SAR) with escape provisions.

Hand protection:
Chemical resistant protective gloves should be worn to prevent all skin contact. Suitable materials may include, chloroprene rubber (Neoprene), nitrile rubber (Buna N), chlorinated polyethylene, polyvinylchloride (Pylox), butyl rubber, depending upon conditions of use.

Eye protection:
Tightly fitting safety goggles (chemical goggles). Wear face shield if splashing hazard exists.

Skin and Body protection:
Cover as much of the exposed skin as possible to prevent all skin contact. Suitable materials may include, saran-coated material, depending upon conditions of use.

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Liquid</td>
</tr>
<tr>
<td>Colour</td>
<td>Clear</td>
</tr>
<tr>
<td>Odour</td>
<td>Faint aromatic</td>
</tr>
<tr>
<td>Odour threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting point/range</td>
<td>&lt; 0 °C</td>
</tr>
<tr>
<td>Boiling point/range</td>
<td>&gt; 200 °C</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 200 °C</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability, (solid, gaseous)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Flash point</td>
<td>&gt; 200 °C</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Solubility</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Water:</td>
<td>Reacts with water</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water):</td>
<td>No data available</td>
</tr>
<tr>
<td>Auto/Self-ignition temperature:</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition temperature:</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>2,000 – 3,000 cps</td>
</tr>
</tbody>
</table>

10 Stability and reactivity

10.1 Reactivity

Corrosion to metals: No corrosive effect on metal.

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:
No decomposition if used and stored according to specifications.

10.3 Possibility of hazardous reactions:

10.4 Conditions to avoid:
Avoid moisture.

10.5 Incompatible materials:
Acids, amines, alcohols, water. Alkalines, strong bases. Substances/products that react with isocyanates.

10.6 Hazardous decomposition products:
Hazardous decomposition products: carbon monoxide, carbon dioxide, nitrogen oxide, hydrogen cyanide, nitrogen oxides, aromatic isocyanates, gases/vapours

11 Toxicological information

11.1 Information on likely routes of exposure:
Routes of entry for solids and liquids are ingestion and inhalation, but may include eye or skin contact. Routes of entry for gases include inhalation and eye contact. Skin contact may be a route of entry for liquefied gases.

11.2 Symptoms related to physical, chemical and toxicological characteristics:
The most important known symptoms and effects are described in the labelling (see section 2) and/or in section 11. Eye irritation, skin irritation, allergic symptoms.

Medical conditions aggravated by overexposure
The isocyanate component is a respiratory sensitizer. It may cause allergic reaction leading to asthma-like spasms of the bronchial tubes and difficulty in breathing. Medical supervision of all employees who handle or come into contact with isocyanates is recommended. Contact may aggravate pulmonary disorders. Persons with history of respiratory disease or hypersensitivity should not be exposed to this product. Preemployment and periodic medical examinations with respiratory function tests (FEV, FVC as a minimum) are suggested. Persons with asthmatic conditions, chronic bronchitis, other chronic respiratory diseases, recurrent eczema or pulmonary sensitization should be excluded from working with isocyanates. Once a person is diagnosed as having pulmonary sensitization (allergic asthma) to isocyanates, further exposure is not recommended.

11.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure:
Assessment of repeated dose toxicity: The substance may cause damage to the olfactory epithelium after repeated inhalation. The substance may cause damage to the lung after repeated inhalation. These effects are not relevant to humans at occupational levels of exposure.

11.4 Numerical measures of toxicity:

**Oral**
- Information on: Diphenylmethane-4,4’-diisocyanate (MDI)
- Type of value: LD50
- Species: rat (male/female)
- Value: > 2,000 mg/kg (Directive 84/449/EEC, B.1)

**Inhalation**
- Type of value: LC50
- Species: rat (male/female)
- Value: 2.0 mg/l (OECD Guideline 403) An aerosol was tested.

**Dermal**
- Information on: Diphenylmethane-4,4’-diisocyanate (MDI)
- Type of value: LD50
- Species: rabbit (male/female)
- Value: > 9,400 mg/kg

### 12 Ecological information

#### 12.1 Aquatic toxicity:
Assessment of aquatic toxicity:
There is a high probability that the product is not acutely harmful to aquatic organisms. The inhibition of the degradation activity of activated sludge is not anticipated when introduced to biological treatment plants in appropriate low concentrations. Based on long-term (chronic) toxicity study data, the product is very likely not harmful to aquatic organisms. The product may hydrolyse. The test result may be partially due to degradation products. The product has not been tested. The statement has been derived from substances/products of a similar structure or composition.

**Toxicity to fish**
- LC50 (96 h) > 1,000 mg/l, Brachydanio rerio (OECD Guideline 203, static)

**Aquatic invertebrates**
- EC50 (24 h) > 1,000 mg/l, Daphnia magna (OECD Guideline 202, part 1, static)

**Aquatic plants**
- EC50 (72 h) 1,640 mg/l (growth rate), Scenedesmus subspicatus (OECD Guideline 201, static)

#### 12.2 Persistence and degradability:
Poorly biodegradable. The product is unstable in water. The elimination data also refer to products of hydrolysis.

#### 12.3 Bioaccumulative potential:
No data available on the product itself.

#### 12.4 Mobility in soil:
No data available.

#### 12.5 Other adverse effects:
No further relevant information available.

### 13 Disposal considerations

#### 13.1 Waste treatment methods
Waste from residue/unused product:
This product should not be allowed to enter drains, water courses or the soil. Dispose of this material in a safe manner and in accordance with federal, state and local regulations.

Contaminated packaging:
Disposal must be made in accordance with official federal, state and local regulations.

### 14 Transport information

**DOT**
Not classified as a dangerous good under transport regulations

**IATA**
Not classified as a dangerous good under transport regulations

### 15 Regulatory Information

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

**Federal Regulations**

- Registration status:
  - Chemical TSCA, US released / listed
  - EPCRA 311/312 (Hazard categories): Acute; Chronic

**EPCRA 313: CAS Number**

- **Chemical name:** Diphenylmethane-4,4’-diisocyanate (MDI)
- **CAS Number:** 101-68-8
- **Chemical name:** Diphenylmethane-4,4’-diisocyanate (MDI)

**CERCLA RQ**

- **CAS Number:** 5000 LBS
- **Chemical name:** Diphenylmethane-4,4’-diisocyanate (MDI)

**State regulations**

- **State RTK**
  - **CAS Number:** 26447-40-5
  - **Chemical name:** Methylene diphenyl diisocyanate
  
- **MA, NJ, PA**
  - **CAS Number:** 101-68-8
  - **Chemical name:** Diphenylmethane-4,4’-diisocyanate (MDI)

### 16 Other information

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.

**Abbreviation and acronyms:**

- **ADR:** European Agreement concerning the International Carriage of Dangerous Goods by Road
- **IMDG:** International Maritime Code for Dangerous Goods
- **DOT:** US Department of Transportation
- **IATA:** International Air Transport Association
- **GHS:** Globally Harmonized System of Classification and Labeling of Chemicals
- **ACGIH:** American Conference of Governmental Industrial Hygienist.
- **EINECS:** European Inventory of Existing Commercial Chemical Substances
- **ELINCS:** European List of Notified Chemical Substances
- **CAS:** Chemical Abstracts Service (division of the American Chemical Society)
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