

Section 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Insulthane Extreme Part A  
**Chemical Name:** Polymeric MDI  
**Manufacturer:** Elastochem Specialty Chemicals Inc.  
37 Easton Road  
Brantford, Ontario N3P 1J4  
Phone (519) 754-1678 Fax (519) 754-4487

**Supplied by:** Elastochem Specialty Chemicals Inc.  
**Emergency Telephone #:** Chemtrec Emergency Number: 800-424-9300  
**Intended use of Product:** Component of a Foam Insulation System

Section 2: COMPOSITION, INFORMATION ON INGREDIENTS

Ingredient	% (w/w)	CAS #	Exposure Limit	LD50/LC50
Diphenylmethane diisocyanate (MDI)	1-5	026447-40-5	TWA 0.005PPM PEL 0.02PPM	Not available/ 172- 187mg/m3 4 hr (Rat)
Polymethylene polyphenyl isocyanate	40-55	009016-87-9	Not available	>2000mg/kg (oral, rat) / 490 mg/m3 4 hr (Inh: rat)
4'4'-Diphenyl methane diisocyanate	30-45	101-68-8	TWA 0.005 PPM PEL 0.02 PPM	>10000mg/kg (Oral, rat) / 490 mg/m3 4 hr (rat)

Consult local authorities for acceptable exposure limits

Section 3: HAZARDS IDENTIFICATION

**Routes of Entry:** Eye contact, Skin contact, Ingestion, Inhalation.

**Acute Effects:**

**Eye Contact:** May cause slight irritation.

**Skin Contact:** Prolonged or repeated exposure may cause skin irritation.

**Inhalation:** Excessive exposure may cause irritation of the upper respiratory tract and lungs.

**Ingestion:** Toxicity is low for ingestion

**Chronic Effects:** Chronic exposure to MDI may cause respiratory sensitization in susceptible individuals.

See toxicological information (section 11)

Section 4: FIRST AID MEASURES

**Skin:** Clean exposed area with soap and water. Remove contaminated clothing and seek medical attention if irritation develops.

**Eyes:** Immediately flush thoroughly with water for at least 20 minutes lifting eye lids occasionally. Get prompt medical attention.

**Inhalation:** Remove to fresh air; give artificial respiration if not breathing. Get medical attention.

**Ingestion:** Do not induce vomiting. If conscious, give victim 2 glasses of water. Never give anything to an unconscious person. Get medical attention immediately.

Section 5: FIRE FIGHTING MEASURES

**Means of Extinction:** Use large amounts of water spray, foam, dry chemical, or CO<sub>2</sub>. Water spray to cool fire-exposed containers.

**Special Procedures:** None

**Flashpoint:** 199 °C

**Flammable Limits LEL (%):** Not available

**Flammable Limits UEL (%):** Not available

**Auto Ignition Temperature:** Not available.

**Hazardous Combustion Products:** May produce carbon dioxide, carbon monoxide, oxides of nitrogen, dense black smoke, hydrogen cyanide, Isocyanates, Isocyanic Acid.

**Sensitivity to Mechanical Impact:** Not available

**Sensitivity to Static Discharge:** Not available

Section 6: ACCIDENTAL RELEASE MEASURES

**Spill or leak Procedure:**

Evacuate all non essential personnel. Ventilate. Eliminate all sources of ignition. Dike area to prevent spreading. Stop leak if safe to do so. Wear full protective equipment, including respiratory equipment during clean up. Prevent runoff into drains, sewers, and other waterways.

Section 7: HANDLING AND STORAGE

**Handling & Storage:**

Store in a cool dry place away from any source of ignition. Handle in a well ventilated area with local exhaust. Wear all personal protective equipment. Storage temperature (Min/Max: 10/38°C).

**Special Shipping information:** None

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTIONS

**Personal Protective Equipment:** A positive pressure, supplied air respirator is required. An air purifying respirator is generally not recommended based on the poor warning properties of the product. At least an air-purifying respirator equipped with an organic vapour cartridge and particulate pre-filters must be worn.  
**Engineering controls:** Local exhaust ventilation is recommended.

#### Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Odour: Musty Odour	Vapour Density: No Data
Appearance: Brown Liquid	Evaporation Rate: 3.6
Physical State: Liquid	Solubility in Water: NIL
Odour Threshold: 200 ppm	%Volatile by Volume: 55-75%
Specific Gravity: 1.24 @25°C	Boiling Point: 208°C
Freezing Point: < 0 °C	pH: N/A
Viscosity: 50-100 cps	Vapour Pressure: <0.0001mmHg @20°C

#### Section 10: STABILITY AND REACTIVITY

**Chemical Stability:** Product is stable under normal conditions.  
**Conditions to avoid(if unstable):** High temperatures, open flames and sparks.  
**Incompatibility (Materials to avoid):** Water, amines, strong bases, alcohols. Copper Alloys.  
**Hazardous decomposition Products:** Carbon Monoxide, carbon dioxide, oxides of nitrogen, dense black smoke, hydrogen cyanide, isocyanates, isocyanic acid.  
**Hazardous Polymerization:** Polymerization will not occur.

#### Section 11: TOXICOLOGICAL INFORMATION

**LD50:** oral-rat >2000 mg/Kg  
**LC50:** inhalation-rat 490 mg/m3  
**Carcinogenicity:** Not listed by IARC, NTP or regulated as a carcinogen by OSHA.  
**Teratogenicity:** None Known.  
**Reproductive Effects:** Not available.  
**Mutagenicity:** None Known.

#### Section 12: ECOLOGICAL INFORMATION

Ecological data is based on polymeric MDI.  
**Biodegradability:** 0% Exposure Rate: 28 days  
**Bioaccumulation:** Rainbow trout. Exposure time: 112 days, <1 BCF. Does not bioaccumulate.  
**Fish Toxicity:** LC0: >1000 mg/l, 96 hr, Zebra Fish  
**Fish Toxicity:** LC0: >3000 mg/l, 96 hr, Killifish  
**Fish Toxicity:** EC50: >1000 mg/l, 24 hr, Daphnia magna

Section 13: DISPOSAL CONSIDERATIONS

**Disposal Procedure:**

Comply with Federal, provincial, and local regulations on reporting releases.

Consult your local or regional authorities.

Section 14: TRANSPORT INFORMATION

**TDG (TRANSPORATION OF DANGEROUS GOODS) CLASSIFICATION:** Not Regulated

Section 15: REGULATORY INFORMATION

**WHMIS CLASSIFICATION:** D2A, D-2B  
**Domestic Substance List (DSL):** Yes

Section 16: OTHER INFORMATION

**References:** Canadian Guide of the Law and Regulations of the Transportation of Dangerous Goods. Controlled products regulations. Manufacturer's Material Safety Data Sheet. This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

**Other special considerations:** No additional remark

**Regulatory Affairs Department:** 519-754-1678

**DATE:** October 10, 2014 **REVISION** 1

**PREPARED BY:** Regulatory Affairs group,  
Elastochem Specialty Chemicals Inc.

**Section 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Product Name:                    Elastochem – Insulthane        Extreme    Part B  
 Chemical Name:                Polymeric Resin  
 Manufacturer:                    Elastochem Specialty Chemicals Inc.  
     37 Easton Road  
     Brantford, Ontario N3P 1J4  
     Phone(519)754    - 1678 Fax(519)754        - 4487

Supplied by:                      Elastochem Specialty Chemicals Inc.  
 Emergency Telephone #:        Chemtrec Emergency Number: 800                - 424 - 9300  
 Intended use of Product:        Component of a Foam Insulation System

**Section 2: COMPOSITION, INFORMATION ON INGREDIENTS**

Ingredient	Approximate Concentration	CAS #	Exposure Limits	LD50/LC50
Hydrofluoro carbon	7- 13%	102687 - 65 - 0	Not available	Not available/ 120 000ppm 4hr (rat) /
2- Butoxyethanol	1- 5%	111 - 76 - 2	Not available	470 mg/kg (rat) / 450 ppm/4hr (rabbit)

Consult local authorities for acceptable exposure limits \_\_\_\_\_

**Section 3: HAZARDS IDENTIFICATION**

Routes of Entry:                Eye contact, Skin contact, Ingestion, Inhalation.  
 Acute Effects:

- Eye Contact:                    Causes eye irritation. May cause temporary fogging of the eyes.
- Skin Contact:                   Causes skin irritation.
- Inhalation:                     May cause respiratory tract irritation.
- Ingestion:                      May be harmful if swallowed.

Chronic Effects:                Overexposure to vapour may cause                    e central nervous system depression. Overexposure may cause irregular heartbeat. Chronic exposure may cause blood disorders. Chronic ingestion may cause kidney and liver damage.

See toxicological information (section 11) \_\_\_\_\_

Section 4: FIRST AID MEASURES

Skin: Clean exposed area with soap and water. Remove contaminated clothing and seek medical attention if irritation develops.

Eyes: Immediately flush thoroughly with water for at least 20 minutes lifting eye lids occasionally. Consult a physician if irritation continues.

Inhalation: Remove to fresh air; give artificial respiration if not breathing. Get medical attention.

Ingestion: Do not induce vomiting. Get medical attention immediately.

Section 5: FIRE FIGHTING MEASURES

Means of Extinction: Carbon dioxide, dry chemical, foam. In case of larger fires, water spray should be used.

Special Fire Fighting Procedures: Firefighter should be equipped with self contained breathing apparatus to protect against potentially toxic and irritating fumes. Cool containers with cold water spray.

Flashpoint: Not available.

Flammable Limits LEL (%): Not available

Flammable Limits UEL (%): Not available

Auto Ignition Temperature: Not available.

Hazardous Combustion Products: May produce carbon dioxide, carbon monoxide, oxides of nitrogen. Dense black smoke. Other potentially toxic fumes.

Sensitivity to Mechanical Impact: Not applicable.

Sensitivity to Static Discharge: Not applicable.

Section 6: ACCIDENTAL RELEASE MEASURES

Spill or leak Procedure:  
Evacuate all non essential personnel. Utilize recommended protective clothing. Avoid breathing vapours and skin contact. Dike area to prevent spreading. Cover spill with inert material and collect for proper disposal. Wash area with soapy water and rinse. Prevent runoff into drains, sewers, and other waterways.

Section 7: HANDLING AND STORAGE

Handling & Storage:  
Store in a cool dry place away from any source of ignition. Handle in a well ventilated area with local exhaust. Wear all personal protective equipment. Storage temperature (Min/Max: 18/29°C).

Special Shipping information: None

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTIONS

Personal Protective Equipment : Safety glasses, chemical resistant gloves, protective clothing.

Ventilation: Local exhaust ventilation is recommended to prevent overexposure.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Odour: Amine Odour  
Appearance: Green Liquid  
Physical State: Liquid  
Odour Threshold: Not Available

Vapour Density: Not Available  
Evaporation Rate: Not Available  
Vapour Pressure: Not Available  
Solubility in Water: Not

Specific Gravity: Not Available

% Volatile by Volume: Not Available

Freezing Point: Not Available  
Viscosity: Not Available  
Boiling Point: Not Available  
N/A – Not Available

Section 10: STABILITY AND REACTIVITY

Chemical Stability: Product is stable under normal conditions.  
Conditions to avoid(if unstable): High temperatures, open flames and sparks.

Incompatibility (Materials to avoid): Oxidizing agents, isocyanates.

Hazardous decomposition Products: Carbon Monoxide, carbon dioxide, oxides of nitrogen. Dense black smoke. Other potentially toxic fumes .

Hazardous Polymerization: Polymerization will not occur.

Section 11: TOXICOLOGICAL INFORMATION

LD50: Not available

LC50: Not available

Carcinogenicity: The components of this product are not listed by IARC, NTP or regulated as a carcinogen by OSHA.

Teratogenicity: Not available.

Reproductive Effects: Not available.

Mutagenicity: Not available.

Section 12: ECOLOGICAL INFORMATION

Fish toxicity: Not available

Biodegradability: Not available

Section 13: DISPOSAL CONSIDERATIONS

Disposal Procedure:  
Comply with Federal, provincial, and local regulations on reporting releases.

Consult your local or regional authorities.

Section 14: TRANSPORT INFORMATION

TDG (TRANSPORTATION OF DANGEROUS GOODS) CLASSIFICATION: Not Regulated

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Domestic Substance List (DSL): yes

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Other special considerations: No additional remark  
Regulatory Affairs Department: 519 - 754 - 1678

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