Section 1: IDENTIFICATION

GSH Product Identifier: Insulthane Edge 2K 600 Part A
Other means of Identification: None

Relevant Identified uses of the substance or mixture and uses advised against
Product Use: Low pressure polyurethane foam
Area of Application: Foam Sealant
Supplier/Manufacturer: Elastochem Specialty Chemicals Inc.
37 Easton Road
Brantford, Ontario N3P 1J4
Phone(519)754-1678 Fax(519)754-4487
Emergency Telephone #: Chemtrec Emergency Number: 800-424-9300

Section 2: Hazard Identification

Classification of the substance or mixture:

Gases Under Pressure- Compressed Gas
Skin Corrosion/Irritation – Category 1
Sensitization (Skin)- Category 1
Serious Eye Damage/Eye Irritation – Category 2A
Sensitization (Respiratory) – Category 1
Specific Target organ toxicity single exposure (Respiratory Tract Irritation)–Category 3
Specific Target organ toxicity repeated exposure – Category 1

GHS label elements

Signal word: Danger
Pictogram:

Hazard Statements: Contains gas under pressure; may explode if heated. Causes serious eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Causes damage to organs through prolonged or repeated exposure. May displace oxygen and cause rapid suffocation.

Precautionary statements:
Prevention: Avoid breathing dust/fume/gas/mist/vapours/spray
Use in a well ventilated area
Wash thoroughly after handling
Wear protective gloves

Hazards not otherwise classified identified during the classification process: Not available

Section 3: Composition/information on ingredients

Substance/mixture: Mixture
Other means of identification: Not available

Ingredient Name	Concentration	Identification Number
4'4' diphenylmethane diisocyanate (MDI)	30%-60%	101-68-8
Polymeric diphenylmethane diisocyanate	30%-60%	9016-87-9
1,3,3,3 Tetrafluoropropene	5%-10%	29118-24-9
Nitrogen	1%-5%	7727-37-9

Section 4: FIRST AID MEASURES

Description of necessary first aid measures
Skin: Clean exposed area with soap and warm water. Continue to rinse for at least 10 minutes. Remove contaminated clothing. Wash clothes before reuse. Seek medical attention if irritation persists.
Eyes: Immediately flush thoroughly with water for at least 15 minutes lifting eye lids occasionally. Seek medical attention immediately.
Inhalation: Remove victim to fresh air; give artificial respiration if not breathing. Seek medical attention.
Ingestion: Immediately give a glass of water. Remove victim to fresh air and keep at rest in a position comfortable for breathing. Do not induce vomiting. Seek medical attention immediately.

Most important symptoms/effects, acute and delayed
Potential acute health effects
Not available

Over exposure signs/symptoms
Skin Contact: This material can cause inflammation of the skin on contact.
Eye Contact: This material may produce eye irritation and product eye damage 24 hours or more after exposure. Moderate inflammation may be expected with redness; conjunctivitis may occur with prolonged exposure.
Inhalation: This material can cause respiratory irritation.
Ingestion: This material is not thought to produce adverse health effects following ingestion.

Delayed and Immediate effects and also chronic effects from short and long term exposure
Short Term Exposure: Not available
Long Term Exposure: Not available

Indication of immediate medical attention and special treatment needed, if necessary
Notes to Physician: Treat symptomatically.
Specific Treatments: None
Protection of first aiders: No action shall be taken involving any personal risk or without suitable training. Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Section 5: FIRE FIGHTING MEASURES

Means of Extinction: Small quantities of water in contact with hot liquid may react violently with generation of a large volume of rapidly expanding hot sticky semi solid foam. Cooling with flooding quantities of water reduces the risk. Foam and dry chemical powder.
Specific hazards arising from the chemical: Contents under pressure. Avoid contamination with oxidizing agents, ie) nitrates, oxidizing acids, chlorine bleaches, pool chlorine etc. as ignition may result.
Hazardous combustion products: May include oxides of carbon, isocyanates, hydrogen cyanide, and small amounts of nitrogen oxides.
Special protective equipment and precautions for fire-fighters:
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk without suitable training. Fire fighters should wear appropriate protective equipment and self contained breathing apparatus with a full face piece operated in positive pressure mode. Move undamaged containers from immediate hazard area if it can be done safely. Warning: Aerosol containers may present pressure related hazards.

Section 6: ACCIDENTAL RELEASE MEASURES

Methods and material for containment and cleaning up:
Spill Procedure:
Clean up personnel must wear protective equipment to prevent contact with the product. Evacuate the area of all unnecessary personnel. Stop spill at source. Clean up spills immediately. Avoid contamination with water, alkalies and detergent solutions. Material reacts with water and generates gas. Do not reseal container if contamination is suspected. Do not touch the spill material.
Personal Precautions, protective equipment and emergency procedures:
Ensure adequate ventilation. Wear personal protection equipment. Remove persons to safety. Do not breathe vapours or spray mist. Suitable material for taking up: Absorb spill with inert material (e.g. dry sand or earth), then place in a chemical waste container.

Section 7: HANDLING AND STORAGE

Precautions for safe handling:

Protective Measures:

Put on appropriate personal protective equipment. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Use only with adequate ventilation or wear an appropriate respirator. Keep in the original container and keep tightly closed when not in use.

Advice on general occupational hygiene:
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored, and processed. Workers should wash hands before, eating, drinking or smoking. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage, including any incompatibilities:
Store product in accordance with local regulation. Store product at room temperature away from heat and moisture. Store product in original container in a dry, cool, and well ventilated area with local exhaust. Keep away from incompatible materials and food and drink. Keep container tightly closed and sealed until ready for use.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTIONS

Control Parameters:

Appropriate Engineering Controls
Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapour, etc) below recommended exposure limits. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes, and clothing. Do not breathe dust/fume/gas/mist/vapours.

Individual Protection Measures
Eye Protection: When directly handling liquid product, eye protection is required, such as chemical safety goggles with side shields or chemical safety goggles with side shields in combination with a full face shield when there is a greater risk of splash.
Protection for skin: Avoid all skin contact. Depending on the conditions of use, cover as much of the exposed skin area as possible with appropriate clothing to prevent skin contact.
Protection for hands: Chemical resistant, impervious gloves complying with an approved standard should be worn at all times when handling this product. For example, isocyanate resistant materials include Teflon, Viton, nitrile rubber and some PVA gloves.
Respiratory Protection: Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content. Cartridge performance is affected by humidity. Cartridges should be changed after 2 hours of continuous use unless it is determined that the humidity is less than 75%, in which case, cartridges can be used for 4 hours. Used cartridges should be discarded daily, regardless of the length of time used.
Hygiene Measures: Wash hands, forearms and face thoroughly after handling chemical products.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Colour: Amber to dark brown liquid	Vapour Pressure: Not available
Physical State: Compressed gas	Vapour Density: Not available
Odour: Not available	Relative Density: 1.2
Odour Threshold: Not available	Solubility in water: Partly miscible
pH: Not available	Partition coefficient: Not available
Melting Point/Freezing Point: Not available	Auto Ignition Temp: Not available
Initial Boiling Point: 208°C	Decomposition Temp: Not available
Flash Point: >199°C	Viscosity: Not available
Evaporation Rate: Not available	Specific Gravity: Not available
Flammability: Not applicable	

Section 10: STABILITY AND REACTIVITY

Chemical Stability: This is a stable material at room temperature.
Possibility of Hazardous Reactions: Contents are under pressure and exposure to high temperature can cause containers to rupture or explode. Avoid excessive heat and sources of ignition. Reacts with strong oxidizing agents.
Conditions to avoid: High temperatures, open flames, sparks and incompatible materials.
Incompatibility (Materials to avoid): oxidizing agents, ie. Nitrates, oxidizing acids, chlorine bleaches, pool chlorine, etc. as ignition may result.
Hazardous decomposition Products: May include, and are not limited to: oxides of carbon, hydrogen cyanide, isocyanates, hydrogen cyanide.

Section 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute Toxicity: Not available

Irritation:
Skin Irritation: Causes inflammation of the skin on contact.
Eye Irritant: may cause eye irritation.

Sensitization:
Skin sensitization may occur in some people.

Specific organ toxicity: Not available

Mutagenicity:

Test data using laboratory animals was predominately negative.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity:

	Endpoint	**Test Duration (hr)**	**Species**	**Value**	**Source**
4,4'Diphenylmethane Diisocyanate (MDI)	EC50	48 hours	Crustacea	>100mg/l	2

Persistence and Degradability:

Ingredient	Persistence: Water/Soil	Persistence: Air
4,4' Diphenylmethane diisocyanate (MDI)	Low (Half-life = 1 day)	Low (Half-life=0.24 days)

Bioaccumulative Potential:

Ingredient	Bioaccumulation
4,4' Diphenylmethane diisocyanate (MDI)	Low (BCF=15)

Mobility in Soil:

Ingredient	Mobility
4,4' Diphenylmethane diisocyanate (MDI)	Low (LogKOC=376200)

Other adverse effects: No evidence of ozone depleting properties were found in the current literature.

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: UN3500
Proper Shipping Name: Chemical under pressure, n.o.s.
(Hydrofluoroolefin, Nitrogen)
Class: 2.2 **Packing Group:** Not applicable
Special Precautions: Not available

Section 15: REGULATORY INFORMATION

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

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

Section 16: OTHER INFORMATION

References: Canadian Guide of the Law and Regulations of the Transportation of Dangerous Goods. Controlled products regulations. Manufacturer's Safety Data Sheet.
Regulatory Affairs Department: 519-754-1678
DATE: June 12, 2025 **REVISION** 1
PREPARED BY: Regulatory Affairs group,
Elastochem Specialty Chemicals Inc.

Section 1: IDENTIFICATION

GSH Product Identifier: Insulthane Edge 2K 600 Part B
Other means of Identification: None

Relevant Identified uses of the substance or mixture and uses advised against

Product Use: Low pressure foam sealant
Area of Application: Foam Sealant
Supplier/Manufacturer: Elastochem Specialty Chemicals Inc.
37 Easton Road
Brantford, Ontario N3P 1J4
Phone(519)754-1678 Fax(519)754-4487
Emergency Telephone #: Chemtrec Emergency Number: 800-424-9300

Section 2: Hazard Identification

Classification of the substance or mixture:

Gases Under Pressure- Compressed Gas
Skin Corrosion/Irritation – Category 2
Serious Eye Damage/Eye Irritation – Category 2A
Reproductive Toxicity – Category 2
Hazardous to the Aquatic Environment Long Term Hazard – Category 3

GHS label elements

Signal word: Warning
Pictogram:

Hazard Statements: Contains gas under pressure; may explode if heated. Causes skin irritation. Harmful to aquatic life with long lasting effects. May displace oxygen and cause rapid suffocation.

Precautionary statements:
Prevention: Avoid breathing dust/fume/gas/mist/vapours/spray
Use in a well ventilated area
Wash thoroughly after handling
Wear protective gloves

Hazards not otherwise classified identified during the classification process: Not available

Section 3: Composition/information on ingredients

Substance/mixture: Mixture
Other means of identification: Not available

Ingredient Name	Concentration	Identification Number
1,3,3,3-tetrafluoropropene	10%-20%	29118-24-9
Propylene carbonate	1%-5%	108-32-7
Diethylene glycol	1%-5%	111-46-6
Tris(2-chloroisopropyl)phosphate	15%-40%	13674-84-5
N-methyldicyclohexlamine	1%-5%	7560-83-0
Glycerol	1%-5%	56-81-5
Nitrogen	<5%	7727-37-9

Section 4: FIRST AID MEASURES

Description of necessary first aid measures
Skin: Clean exposed area with soap and warm water. Continue to rinse for at least 10 minutes. Remove contaminated clothing. Wash clothes before reuse. Seek medical attention.
Eyes: Immediately flush thoroughly with water for at least 15 minutes holding eye lids open. Hold eyelids open and pour water slowly over the eyeballs at the inner corners. Seek medical attention immediately.
Inhalation: Remove victim to fresh air; give artificial respiration if not breathing. Seek medical attention.
Ingestion: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Avoid giving milk or oils. Seek medical attention immediately.

Most important symptoms/effects, acute and delayed
Potential acute health effects
Not available

Over exposure signs/symptoms
Skin Contact: This material can cause inflammation of the skin on contact.
Eye Contact: This material may produce eye irritation and damage.
Inhalation: This material is not thought to produce respiratory irritation.
Ingestion: Accidental ingestion of this material may be damaging to the health of the individual.

Delayed and Immediate effects and also chronic effects from short and long term exposure
Short Term Exposure: Not available
Long Term Exposure: Not available

Indication of immediate medical attention and special treatment needed, if necessary
Notes to Physician: Treat symptomatically.
Specific Treatments: None

Protection of first aiders: No action shall be taken involving any personal risk or without suitable training. Use personal protective equipment. Avoid contact with skin, eyes and clothing.

Section 5: FIRE FIGHTING MEASURES

Means of Extinction: Use water spray or fog, foam, or dry chemical powder.
Specific hazards arising from the chemical: Contents under pressure. Avoid contamination with oxidizing agents, ie) nitrates, oxidizing acids, chlorine bleaches, pool chlorine etc. as ignition may result.
Hazardous combustion products: May include oxides of carbon, hydrogen fluoride and other pyrolysis products typical of burning organic material.
Special protective equipment and precautions for fire-fighters:
Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk without suitable training. Fire fighters should wear appropriate protective equipment and self contained breathing apparatus with a full face piece operated in positive pressure mode. Move undamaged containers from immediate hazard area if it can be done safely. Warning: Aerosol containers may present pressure related hazards.

Section 6: ACCIDENTAL RELEASE MEASURES

Spill Procedure:
Clean up personnel must wear protective equipment to prevent contact with the product. Evacuate the area of all unnecessary personnel. Avoid breathing vapour and any contact with liquid or gas. Protective equipment including respirator should be used. DO NOT enter confined spaces where gas may have accumulated. Do not reseal container if contamination is suspected.
Personal Precautions, protective equipment and emergency procedures:
Ensure adequate ventilation. Wear personal protection equipment. Remove persons to safety. Do not breathe vapours or spray mist.
Methods and material for containment and cleaning up:
Fit vent pipes. Release pressure under safe, controlled conditions. Burn issuing gas at vent pipes. DO NOT exert excessive pressure on values. DO NOT attempt to operate damaged valve.

Section 7: HANDLING AND STORAGE

Precautions for safe handling:

Protective Measures:
Put on appropriate personal protective equipment. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapours/spray. Use only with adequate ventilation or wear an appropriate respirator. Consider use in closed pressurized systems, fitted with temperature, pressure and safety relief valves

which are vented for safe dispersal. Use only properly specified equipment which is suitable for this product, its supply pressure and temperature. The tubing network design connecting gas cylinders to the delivery system should include appropriate pressure indicators and vacuum or suction lines. Fully welded types of pressure gauges, where the bourdon tube sensing element is welded to the gauge body are recommended. DO NOT transfer gas from one cylinder to another.

Advice on general occupational hygiene:
Eating, drinking and smoking should be prohibited in areas where this material is handled, stored, and processed. Workers should wash hands before, eating, drinking or smoking. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage, including any incompatibilities:
Store product in accordance with local regulation. Store product at room temperature away from heat and moisture. Store product in original container in a dry, cool, and well ventilated area with local exhaust. Keep away from incompatible materials and food and drink. Avoid magnesium, aluminum, and their alloys, brass and steel. Avoid reaction with oxidizing agents. Keep container tightly closed and sealed until ready for use.

Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTIONS

Control Parameters:

Appropriate Engineering Controls
Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapour, etc) below recommended exposure limits. Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes, and clothing. Do not breathe dust/fume/gas/mist/vapours.

Individual Protection Measures
Eye Protection: When directly handling liquid product, eye protection is required, such as chemical safety goggles with side shields or chemical safety goggles with side shields in combination with a full face shield when there is a greater risk of splash.
Protection for skin: Avoid all skin contact. Depending on the conditions of use, cover as much of the exposed skin area as possible with appropriate clothing to prevent skin contact.
Protection for hands: Chemical resistant, impervious gloves complying with an approved standard should be worn at all times when handling this product.
Respiratory Protection: Cartridge respirators should never be used for emergency ingress or in areas of unknown vapour concentrations or oxygen content. Cartridge performance is affected by humidity. Cartridges should be changed after 2 hours of continuous use unless it is determined that the humidity is less than 75%, in which case,

cartridges can be used for 4 hours. Used cartridges should be discarded daily, regardless of the length of time used.
Hygiene Measures: Wash hands, forearms and face thoroughly after handling chemical products.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance & Colour: Amber to dark brown liquid	Vapour Pressure: Not available
Physical State: Compressed gas	Vapour Density: Not available
Odour: Not available	Relative Density: 1.2
Odour Threshold: Not available	Solubility in water: Partly miscible
pH: Not available	Partition coefficient: Not available
Melting Point/Freezing Point: Not available	Auto Ignition Temp: Not available
Initial Boiling Point: Not available	Decomposition Temp: Not available
Flash Point: >200°C	Viscosity: Not available
Evaporation Rate: Not available	Specific Gravity: Not available
Flammability: Not applicable	

Section 10: STABILITY AND REACTIVITY

Chemical Stability: This is a stable material at room temperature.
Possibility of Hazardous Reactions: Contents are under pressure and exposure to high temperature can cause containers to rupture or explode. Avoid excessive heat and sources of ignition. Reacts with strong oxidizing agents.
Conditions to avoid: High temperatures, open flames, sparks and incompatible materials.
Incompatibility (Materials to avoid): magnesium, aluminum and their alloys, brass and steel. Avoid reactions with oxidizing agents.
Hazardous decomposition Products: not available

Section 11: TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute Toxicity: Not available

Irritation:
Skin Irritation: Causes inflammation of the skin on contact.
Eye Irritant: May cause eye irritation.

Sensitization: Not available

Specific organ toxicity: Not available

Mutagenicity: Not available

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Not available

Persistence and Degradability:

Ingredient	Persistence: Water/Soil	Persistence: Air
Propylene carbonate	High	High
Diethylene glycol	Low	Low
Tris (2-chloroisopropyl) phosphate	High	High
N-methyldicyclohexlamine	High	High
Glycerol	Low	Low

Bioaccumulative Potential:

Ingredient	Bioaccumulation
Propylene carbonate	Low (LogKOW=-0.41)
Diethylene glycol	Low (BCF=180)
Tris (2-chloroisopropyl) phosphate	LOW (BCF=4.6)
N-methyldicyclohexlamine	LOW (LogKOW=3.71)
Glycerol	LOW (LogKOW=-1.76)
Nitrogen	LOW (LogKOW=0.67)

Mobility in Soil:

Ingredient	Mobility
Propylene carbonate	Low (LogKOW=-14.85
Diethylene glycol	High(LogKOW=1)
Tris (2-chloroisopropyl) phosphate	LOW (LogKOW=1278)
N-methyldicyclohexlamine	LOW (LogKOW=325)
Glycerol	High (LogKOW=1)

Other adverse effects: No evidence of ozone depleting properties were found in the current literature.

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: UN3500
Proper Shipping Name: Chemical under pressure, n.o.s.
(Hydrofluoroolefin, Nitrogen)
Class: 2.2 **Packing Group:** Not applicable

Special Precautions: Not available

Section 15: REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture:
This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations.

Section 16: OTHER INFORMATION

References: Canadian Guide of the Law and Regulations of the Transportation of Dangerous Goods. Controlled products regulations. Manufacturer's Safety Data Sheet.
Regulatory Affairs Department: 519-754-1678
DATE: July 21, 2025 **REVISION** 1
PREPARED BY: Regulatory Affairs group,
Elastochem Specialty Chemicals Inc.