

Section 1: IDENTIFICATION

Product Name: Gap and Crack Foam
Synonyms: Not available.
Product Use: Foam Sealant.
Restrictions on Use: Not available.
Manufacturer/Supplier: Commercial Thermal Solutions, Inc.
 524 Brighton Ave, Suite 9
 Spring Lake, NJ 07762
Emergency Phone: ChemTrec: 1-800-424-9300
Date of Preparation of SDS: January 31, 2014

Section 2: HAZARD(S) IDENTIFICATION

GHS INFORMATION

Classification: Flammable Aerosols, Category 2
 Gases Under Pressure - Compressed Gas
 Skin Irritation, Category 2
 Eye Irritation, Category 2B
 Sensitization - Respiratory, Category 1
 Sensitization - Skin, Category 1
 Toxic to Reproduction, Effects on or via Lactation
 Specific Target Organ Toxicity (Single Exposure), Category 3 - Respiratory Irritation
 Specific Target Organ Toxicity (Repeated Exposure), Category 2

LABEL ELEMENTS

Hazard Pictogram(s): 

Signal Word: Danger

Hazard Statements: Flammable aerosol.
 Contains gas under pressure; may explode if heated.
 Causes skin irritation.
 Causes eye irritation.
 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 May cause an allergic skin reaction.
 May cause harm to breast-fed children.
 May cause respiratory irritation.
 May cause damage to organs through prolonged or repeated exposure.

Precautionary Statements

Prevention: Obtain special instructions before use.
 Keep away from heat, sparks, open flames, and hot surfaces. – No smoking.
 Do not spray on an open flame or other ignition source.
 Pressurized container: Do not pierce or burn, even after use.

Do not breathe mist, vapors, or spray.
 Avoid contact during pregnancy and while nursing.
 Wash thoroughly after handling.
 Do not eat, drink or smoke when using this product.
 Use only outdoors or in a well-ventilated area.
 Contaminated work clothing should not be allowed out of the workplace.
 Wear protective gloves, protective clothing and eye protection.
 Wear respiratory protection.

Response: If on skin: Wash with plenty of soap and water.
 If inhaled: Remove person to fresh air and keep comfortable for breathing.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 If skin irritation or rash occurs: Get medical advice/attention.
 If eye irritation persists: Get medical advice/attention.
 If experiencing respiratory symptoms: Call a poison center or doctor.
 Take off contaminated clothing and wash it before reuse.

Storage: Store in a well-ventilated place. Keep container tightly closed.
 Store locked up.
 Protect from sunlight.
 Do not expose to temperatures exceeding 50°C / 122°F.

Disposal: Dispose of contents/container in accordance with applicable regional, national and local laws and regulations.

Hazards Not Otherwise Classified: Not applicable.

Ingredients with Unknown Toxicity: 31% of this product mixture consists of ingredient(s) of unknown acute toxicity.

This material is considered hazardous by the OSHA Hazard Communication Standard, (29 CFR 1910.1200).

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Hazardous Ingredient(s)	Common name / Synonyms	CAS No.	% wt./wt.
Isocyanic acid, polymethylenepolyphenylene ester	Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9	30 - 60
Alkanes, C14-17, chloro	Chloroalkanes (chloroparaffin)	85535-85-9	10 - 30
Propane, 2-methyl-	Isobutane	75-28-5	10 - 30
Methane, 1,1'-oxybis-	Dimethyl ether	115-10-6	5 - 10
Morpholine, 4,4'-(oxydi-2,1-ethanediy)bis-	Dimorpholinodiethyl ether	6425-39-4	0.1 - 1

Exact percentage (concentration) of composition has been withheld as a trade secret.

Section 4: FIRST-AID MEASURES

- Inhalation:** If inhaled: Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a poison center or doctor.
- Acute and delayed symptoms and effects:** May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. At room temperature, MDI vapors are minimal due to low volatility. However, certain operations may generate vapor or mist concentrations sufficient to cause respiratory irritation and other adverse effects. Such operations include those in which the material is heated, sprayed or otherwise mechanically dispersed. Allergy-prone people who have been sensitized to isocyanates or even have not been previously exposed to isocyanates may experience symptoms at concentrations as low as 0.0014 ppm. Asthma sufferers or people who easily get contact dermatitis should therefore not be exposed to isocyanates.
- Eye Contact:** If in eyes: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
- Acute and delayed symptoms and effects:** Causes eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision. PMDI may cause severe watering, formation of solid particles in the eye fluid, glaucoma, photophobia (sensitivity to light), blepharospasm (uncontrollable winking), conjunctivitis (inflammation of the mucous membranes of the eye lids with possible discharge), keratitis (inflammation of the cornea) and damage the cornea (opacity or clouding).
- Skin Contact:** Remove the foam from skin using a cloth. Take off immediately all contaminated clothing. Remove uncured foam from skin using delicate solvent like acetone or mineral spirit (avoid contact with eyes). Hardened foam may be removed by persistent washing with soap and large quantities of water. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.
- Acute and delayed symptoms and effects:** May cause an allergic skin reaction. Causes skin irritation. Signs/symptoms may include localized redness, swelling, and itching. Prolonged skin contact may cause redness, swelling, blistering and possible skin sensitization (dermatitis). MDI compounds have a mild tanning action on the skin.
- Ingestion:** If swallowed: Call a poison center or doctor if you feel unwell. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
- Acute and delayed symptoms and effects:** May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

General Advice: In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

Note to Physicians: Symptoms may not appear immediately.

Section 5: FIRE-FIGHTING MEASURES

FLAMMABILITY AND EXPLOSION INFORMATION

Flammable aerosol. Contains gas under pressure; may explode if heated. Containers may explode when heated. Ruptured cylinders may rocket.

Sensitivity to Mechanical Impact: This material is not sensitive to mechanical impact.

Sensitivity to Static Discharge: This material is sensitive to static discharge.

MEANS OF EXTINCTION

Suitable Extinguishing Media: Dry chemical, CO2 or water spray. Move containers from fire area if you can do it without risk.

Unsuitable Extinguishing Media: Not available.

Products of Combustion: Oxides of carbon. Oxides of nitrogen. Hydrogen chloride. Chlorine. Hydrogen cyanide. Isocyanate vapours.

Protection of Firefighters: Wear positive pressure self-contained breathing apparatus (SCBA). Wear chemical protective clothing that is specifically recommended by the manufacturer. It may provide little or no thermal protection. Structural firefighters' protective clothing will only provide limited protection.

Section 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedures: As an immediate precautionary measure, isolate spill or leak area. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. Do not touch or walk through spilled material.

Personal Precautions: Use personal protection recommended in Section 8.

Environmental Precautions: Prevent entry into waterways, sewers, basements or confined areas.

Methods for Containment: Stop leak if you can do it without risk. Do not direct water at spill or source of leak. Use water spray to reduce vapors or divert vapor cloud drift.

Methods for Clean-Up: Remove from surfaces by scraping up excess material and removing residual residue with cloth and solvent such as acetone or mineral spirit, paint thinner, etc. Hardened foam can only be removed physically or mechanically by scraping or buffing.

Other Information: See Section 13 for disposal considerations.

Section 7: HANDLING AND STORAGE

Handling:

Do not swallow. Do not breathe mist, vapors, or spray. Avoid contact during pregnancy and while nursing. Pressurized container: Do not pierce or burn, even after use. Obtain special instructions before use. Do not handle until all safety precautions have been read and

understood. Keep away from heat, sparks, open flames, and hot surfaces. – No smoking. Do not spray on an open flame or other ignition source. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing should not be allowed out of the workplace. See Section 8 for information on Personal Protective Equipment.

Storage:

Store in a well-ventilated place. Keep container tightly closed. Store locked up. Protect from sunlight. Do not expose to temperatures exceeding 50°C / 122°F. Store away from incompatible materials. See Section 10 for information on Incompatible Materials. Keep out of the reach of children.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines Component

Polymeric Methylene Diphenyl Diisocyanate (PMDI) [CAS No. 9016-87-9]

ACGIH: 0.005 ppm (TWA); (1985), For Methylene bisphenyl isocyanate (MDI)

OSHA: 0.02 ppm (C), 0.2 mg/m³ (C); For Methylene bisphenyl isocyanate (MDI)

Chloroalkanes (chloroparaffin) [CAS No. 85535-85-9]

ACGIH: No TLV established.

OSHA: No PEL established.

Isobutane [CAS No. 75-28-5]

ACGIH: 1000 ppm (TWA); (2001)

OSHA: No PEL established.

Dimethyl ether [CAS No. 115-10-6]

ACGIH: No TLV established.

OSHA: No PEL established.

Dimorpholinodiethyl ether [CAS No. 6425-39-4]

ACGIH: No TLV established.

OSHA: No PEL established.

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

TWA: Time-Weighted Average

C: Ceiling

Engineering Controls:

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapour, gas, etc.) below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT (PPE)



- Eye/Face Protection:** Wear safety glasses. Ensure that eyewash stations are close to the workstation location. Use equipment for eye protection that meets the standards referenced by CSA Standard CAN/CSA-Z94.3-92 and OSHA regulations in 29 CFR 1910.133 for Personal Protective Equipment.
- Hand Protection:** Wear protective gloves. Consult manufacturer specifications for further information.
- Skin and Body Protection:** Wear protective clothing.
- Respiratory Protection:** Wear respiratory protection. If engineering controls and ventilation are not sufficient to control exposure to below the allowable limits then an appropriate NIOSH/MSHA approved air-purifying respirator that meets the requirements of CSA Standard CAN/CSA-Z94.4-11, or self-contained breathing apparatus must be used. Supplied air breathing apparatus must be used when oxygen concentrations are low or if airborne concentrations exceed the limits of the air-purifying respirators.
- General Hygiene Considerations:** Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

- Appearance:** Rapidly curing foam dispensed by gaseous propellant from an aerosol container.
- Colour:** Pale yellow.
- Odour:** Characteristic.
- Odour Threshold:** Not available.
- Physical State:** Liquid (Aerosol foam.)
- pH:** Not available.
- Melting Point / Freezing Point:** Not available.
- Initial Boiling Point:** Not available.
- Boiling Range:** Not available.
- Flash Point:** < 0 °C (32 °F)
- Evaporation Rate:** Not available.
- Flammability (solid, gas):** See Section 5.

Lower Flammability Limit:	1.8 % (Isobutane)
Upper Flammability Limit:	8.4 % (Isobutane)
Vapor Pressure:	Not available.
Vapor Density:	Not available.
Relative Density:	0.97 (Water = 1)
Solubilities:	Insoluble in water; reacts with water.
Partition Coefficient: n-Octanol/Water:	Not available.
Auto-ignition Temperature:	Product is not self-igniting.
Decomposition Temperature:	Not available.
Viscosity:	Not available.
Percent Volatile, wt. %:	Not available.
VOC content, wt. %:	Not available.
Density:	Not available.
Coefficient of Water/Oil Distribution:	Not available.

Section 10: STABILITY AND REACTIVITY

Reactivity:	Contact with incompatible materials. Sources of ignition. Exposure to heat.
Chemical Stability:	Stable under normal storage conditions.
Possibility of Hazardous Reactions:	None known.
Conditions to Avoid:	Contact with incompatible materials. Sources of ignition. Exposure to heat.
Incompatible Materials:	Acids. Bases. Oxidizers. Alkali metals. Metals. Amines. Alcohols.
Hazardous Decomposition Products:	Isocyanate vapours. Carbon dioxide.

Section 11: TOXICOLOGICAL INFORMATION

EFFECTS OF ACUTE EXPOSURE

Product Toxicity

Oral:	Not available.
Dermal:	Not available.
Inhalation:	Not available.

Component Toxicity

Component	CAS No.	LD ₅₀ oral	LD ₅₀ dermal	LC ₅₀
Polymeric Methylene Diphenyl Diisocyanate	9016-87-9	49000 mg/kg (rat)	> 9400 mg/kg (rabbit)	490 mg/m ³ (rat); 4H
Chloroalkanes (chloroparaffin)	85535-85-9	Not available.	Not available.	Not available.
Isobutane	75-28-5	Not available.	Not available.	570000 ppm (rat); 15M
Dimethyl ether	115-10-6	Not available.	Not available.	308000 mg/m ³ (rat);
Dimorpholinodiethyl ether	6425-39-4	Not available.	Not available.	Not available.

Likely Routes of Exposure: Eye contact. Skin contact. Inhalation. Ingestion.

Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system. Lungs. Cardiovascular system. Nervous system.

Symptoms (including delayed and immediate effects)

Inhalation: May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Excessive inhalation may cause headache, dizziness, confusion, loss of appetite and/or loss of consciousness. At room temperature, MDI vapors are minimal due to low volatility. However, certain operations may generate vapor or mist concentrations sufficient to cause respiratory irritation and other adverse effects. Such operations include those in which the material is heated, sprayed or otherwise mechanically dispersed. Allergy-prone people who have been sensitized to isocyanates or even have not been previously exposed to isocyanates may experience symptoms at concentrations as low as 0.0014 ppm. Asthma sufferers or people who easily get contact dermatitis should therefore not be exposed to isocyanates.

Eye: Causes eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision. PMDI may cause severe watering, formation of solid particles in the eye fluid, glaucoma, photophobia (sensitivity to light), blepharospasm (uncontrollable winking), conjunctivitis (inflammation of the mucous membranes of the eye lids with possible discharge), keratitis (inflammation of the cornea) and damage the cornea (opacity or clouding).

Skin: May cause an allergic skin reaction. Causes skin irritation. Signs/symptoms may include localized redness, swelling, and itching. Prolonged skin contact may cause redness, swelling, blistering and possible skin sensitization (dermatitis). MDI compounds have a mild tanning action on the skin.

Ingestion: May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Skin Sensitization: Hazardous by OSHA/WHMIS criteria. May cause sensitisation through skin contact.

Respiratory Sensitization: Hazardous by OSHA/WHMIS criteria. May cause sensitisation through inhalation. Allergy-prone people who have been sensitized to isocyanates or even have not been previously exposed to isocyanates may experience symptoms at concentrations as low as 0.0014 ppm. Asthma sufferers or people who easily get contact dermatitis should therefore not be exposed to isocyanates.

Medical Conditions Aggravated By Exposure: Not available.

EFFECTS OF CHRONIC EXPOSURE (from short and long-term exposure)

Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system. Lungs. Cardiovascular system. Nervous system.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation.

Carcinogenicity: Product is not classified as a carcinogen. See Component Carcinogenicity table below for information on individual components.

Component Carcinogenicity

Component	ACGIH	IARC	NTP	OSHA	Prop 65
Polymeric Methylene Diphenyl Diisocyanate (PMDI)	Not listed.	Group 3	Not listed.	Not listed.	Not listed.

Mutagenicity: Not available.

Reproductive Effects: May cause harm to breast-fed children. Avoid contact during pregnancy and while nursing.

Developmental Effects

Teratogenicity: Not available.

Embryotoxicity: Not available.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: Not available.

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Other Adverse Effects: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions: Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

Section 14: TRANSPORT INFORMATION

U.S. Department of Transportation (DOT)

Proper Shipping Name: UN1950, AEROSOLS, 2.1

Class: 2.1

UN Number: UN1950

Packing Group: Not applicable.

Label Code:



Canada Transportation of Dangerous Goods (TDG)

Proper Shipping Name: UN1950, AEROSOLS, 2.1

Class: 2.1

UN Number: UN1950

Packing Group: Not applicable.

Label Code:



Section 15: REGULATORY INFORMATION

Chemical Inventories

US (TSCA)

The components of this product are in compliance with the chemical notification requirements of TSCA.

Canada (DSL)

The components of this product are in compliance with the chemical notification requirements of the NSN Regulations under CEPA, 1999.

Federal Regulations

Canada

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.

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Safety Data Sheet/Material Safety Data Sheet

Last revision: fi- ; 2014

WHMIS Classification: Class A - Compressed Gas.
 Class B5 - Flammable Aerosols.
 Class D2A - Reproductive toxicity.
 Class D2A - Respiratory sensitization.
 Class D2B - Skin sensitization.
 Class D2B - Skin irritant.
 Class D2B - Eye irritant.

Hazard Symbols:



United States

This SDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SARA Title III Component

Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313	RCRA CODE	CAA 112(r) TQ (lbs.)
Not listed.	Not listed.	Not listed.	313#	Not listed.	Not listed.
Polymeric Methylene Diphenyl Diisocyanate					
Isobutane	Not listed.	Not listed.	Not listed.	Not listed.	10000
Dimethyl ether	Not listed.	Not listed.	Not listed.	Not listed.	10000

State Regulations

Massachusetts

US Massachusetts Commonwealth's Right-to-Know Law (Appendix A to 105 Code of Massachusetts Regulations Section 670.000)

Component	CAS No.	RTK List
Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9	Listed.
Isobutane	75-28-5	Listed.
Dimethyl ether	115-10-6	Listed.

New Jersey

US New Jersey Worker and Community Right-to-Know Act (New Jersey Statute Annotated Section 34:5A-5)

Component	CAS No.	RTK List
Polymeric Methylene Diphenyl Diisocyanate (PMDI)	9016-87-9	Listed.
Isobutane	75-28-5	SHHS
Dimethyl ether	115-10-6	SHHS

Note: SHHS = Special Health Hazard Substance

Pennsylvania

US Pennsylvania Worker and Community Right-to-Know Law (34 Pa. Code Chap. 301-323)

Component	CAS No.	RTK List
Isobutane	75-28-5	Listed.
Dimethyl ether	115-10-6	Listed.

Section 16: OTHER INFORMATION

Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for his own particular use.

Date of Preparation of SDS: January 31, 2014

SDS Expiry Date (Canada): January 30, 2017

Version: 1.1