SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Parafast Insulation Adhesive T Part 1

Distributor: Siplast, Inc.
1000 Rochelle Blvd.
Irving, TX  75062
TEL:  800-922-8800
www.siplast.com

24-hour Emergency Response Number: Chemtrec: 800-424-9300

Product Use(s): One component of a two-component polyurethane system

2. HAZARDS IDENTIFICATION

Classifications: Acute Toxicity, Inhalation: Hazard Category 4
Respiratory Sensitization: Hazard Category 1
Skin Sensitization: Hazard Category 1
Skin Irritation: Hazard Category 2
Eye Irritation: Hazard Category 2A
Specific Target Organ Toxicity, Single Exposure: Hazard Category 3
Specific Target Organ Toxicity, Repeated Exposure: Hazard Category 2
Gases Under Pressure: Compressed Gas
Physical Hazards Not Otherwise Classified: None
Health Hazards Not Otherwise Classified: None

Symbols: Health Hazard
Exclamation Point
Gas Cylinder

Signal Word: Danger

Hazard Statements: May be harmful if inhaled, and may cause allergy or asthma symptoms, breathing difficulties, and/or respiratory irritation.
May cause an allergic skin reaction.
May cause skin irritation and serious eye irritation.
May cause damage to the respiratory system and/or skin through prolonged or repeated exposure.
Contains gas under pressure; may explode if heated.

Precautionary Statements: Do not breathe mist, spray, or vapors.
Use only outdoors or in a well-ventilated area.
In case of inadequate ventilation wear proper respiratory protection.
Wear protective gloves and eye/face protection.
Wash hands and forearms thoroughly after handling.
Get medical advice/attention if you feel unwell.
Protect from sunlight. Store in a well-ventilated place.

IF INHALED: If breathing is difficult, remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms or if you feel unwell, call a doctor or Poison Control Center.
2. HAZARDS IDENTIFICATION (continued)

Precautionary Statements: (continued)

**IF ON SKIN:** Wash with plenty of water. Take off contaminated clothing and wash before reuse. Contaminated work clothing must not be allowed out of the workplace. If skin irritation or rash occurs, get medical advice/attention.

**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.

Store locked up in a well-ventilated place. Keep container tightly closed. Dispose of contents/container in accordance with applicable regulations. The acute toxicities of >50% of the product’s ingredients are unknown.

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**EMERGENCY OVERVIEW**

Overexposure to components of this product by inhalation may cause respiratory irritation, asthma-like symptoms, and/or respiratory sensitization.

Skin contact may cause irritation and/or allergy-like symptoms, and eye contact may cause severe irritation. Avoid skin and eye contact, using proper personal protective equipment as needed. See Section #7 for recommendations on proper handling and work practices, and Section #8 for recommendations on personal protective equipment.

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>Percentage</th>
<th>Impurities</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4'-Methylenediphenyl Diisocyanate</td>
<td>101-68-8</td>
<td>25-50</td>
<td>None known</td>
</tr>
<tr>
<td>Diphenylmethane Diisocyanate, Isomers and Homologues</td>
<td>9016-87-9</td>
<td>&gt;50</td>
<td>None known</td>
</tr>
<tr>
<td>1,1,1,2-Tetrafluoroethane</td>
<td>811-97-2</td>
<td>10-25</td>
<td>None known</td>
</tr>
</tbody>
</table>

---

**4. FIRST AID MEASURES**

**Eyes:** Hold eyes open and flush with lukewarm water for at least 15 minutes. Seek immediate medical assistance.

**Skin:** Remove contaminated clothing. Wash affected areas with soap and water for at least five minutes. If irritation persists or a rash occurs, seek medical attention. Launder or dry-clean clothing before reuse.

**Ingestion:** DO NOT induce vomiting. If the subject is conscious, wash mouth and give 2 or more cups of milk or water. Seek immediate medical assistance. Do not attempt to give anything by mouth to an unconscious or convulsive person.

**Inhalation:** If signs and symptoms of respiratory toxicity are observed, remove subject from area and seek immediate medical attention. Keep the subject warm and at rest. If necessary, administer oxygen or perform artificial respiration if necessary and qualified personnel are available to do so.
### 4. FIRST AID MEASURES (continued)

| Guidance for Physician or Poison Control Center: | Inhalation exposure can irritate the respiratory tract and induce respiratory sensitization. Treatment of acute irritation and bronchial constriction should be done according to symptoms. Eye contact can cause moderate to severe irritation. Skin contact can cause moderate irritation, and may elicit an allergic response among susceptible individuals. Treat eye and skin irritation or injury according to symptoms. Extended medical treatment may be necessary for individuals exhibiting respiratory sensitization and/or skin disorders. |

### 5. FIREFIGHTING MEASURES

| Extinguishing Media: | Water spray, carbon dioxide, dry chemical or chemical foam. DO NOT use water jet. |
| Fire and Explosion Hazards: | The container may burst if exposed to elevated temperatures, spilling the contents. If present in a fire or explosion, potential decomposition byproducts include carbon monoxide, oxides of nitrogen, isocyanates, and hydrogen cyanide. |
| Firefighting Instructions: | If fighting a fire in which this product is present, wear a self-contained breathing apparatus with full-facepiece operated in pressure-demand or other positive pressure mode. |

### 6. ACCIDENTAL RELEASE MEASURES

| Methods and Materials: | Absorb spilled material with a sorbent such as sawdust or calcium silicate hydrate. When absorbed, transfer to an impervious container. Neutralize with solution of 8-10% sodium carbonate and 2% liquid detergent in water (10:1 ratio of solution to product). Do not seal container, as CO₂ will be released. Neutralize in a well-ventilated area for at least 48 hours before sealing containers for disposal. |
| Personal Precautions: | Avoid contact with skin, eyes, and mucous membranes. Wear appropriate personal protective equipment (see Section #8) during cleanup and decontamination. Restrict unauthorized personnel during cleanup and disposal operations. |
| Environmental Precautions: | Prevent spills from entering sewers or contaminating soil. |

### 7. HANDLING AND STORAGE

| Handling Precautions: | Containers should be kept tightly closed to prevent contact with moisture and other chemicals. Do not reuse empty containers for any purpose. When handling the product, avoid contact with eyes, skin, and clothing, using protective equipment as needed. Do not use this product around children, and secure it away from children. |
SAFETY DATA SHEET

7. HANDLING AND STORAGE (continued)

Work and Hygiene Practices: To prevent ingestion or contact following use of the product, wash hands and face before eating, drinking, applying cosmetics, or using tobacco. Remove contaminated clothing and protective equipment before entering eating/drinking areas.

Storage Precautions: Keep containers tightly sealed during storage. Store in a dry, well-ventilated area away from sources of ignition and incompatible materials (see Section #10). Protect from heat and direct sunlight. Recommended temperature for storage is 55-85°F (12.8-29.4°C).

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

<table>
<thead>
<tr>
<th>Ingredients Exposure Limits:</th>
<th>Ingredient</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4’-Methylene diphenyl Diisocyanate</td>
<td>0.02 ppm “C”</td>
<td>0.005 ppm TWA</td>
<td></td>
</tr>
<tr>
<td>Diphenylmethane Diisocyanate, Isomers and Homologues</td>
<td>None</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td>1,1,1,2-Tetrafluoroethane</td>
<td>None</td>
<td>None</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ingredients Biological Limits:</th>
<th>Ingredient</th>
<th>Biological Limit(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4’-Methylene diphenyl Diisocyanate</td>
<td>No ACGIH BEIs or other biological limits</td>
<td></td>
</tr>
<tr>
<td>Diphenylmethane Diisocyanate, Isomers and homologues</td>
<td>No ACGIH BEIs or other biological limits</td>
<td></td>
</tr>
<tr>
<td>1,1,1,2-Tetrafluoroethane</td>
<td>No ACGIH BEIs or other biological limits</td>
<td></td>
</tr>
</tbody>
</table>

Engineering Controls: Use appropriate ventilation (dilution or local exhaust) whenever natural ventilation is restricted or inadequate to maintain concentrations of all components within their applicable standards.

Eye/Face Protection: Wear eye protection adequate to prevent eye contact with the product. Plastic-frame spectacles with side shields, chemical goggles, or a face shield are recommended. Do not wear contact lenses when working with this product.

Skin Protection: Wear protective gloves and clothing to prevent skin irritation or injury from contact with the product. Glove materials known to be effective against permeation by isocyanates include butyl rubber, nitrile rubber, and polychloroprene.

Respiratory Protection: If an exposure level to a component exceeds an applicable standard, use a NIOSH-approved respirator of a class and configuration effective for protection from the component(s) generated. Where exposures exceed the OSHA Permissible Exposure Limit (PEL), an airline respirator or self-contained breathing apparatus (SCBA) is recommended. Consult OSHA regulations (29CFR1910.134) and/or American National Standard Z88.2 (ANSI, New York, NY 10036, USA) for guidance.
SAFETY DATA SHEET

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: cream-colored liquid
Odor: aromatic
Odor threshold: not determined
pH: not applicable
Melting point: not determined
Freezing point: not determined
Boiling point: not determined
Boiling range: not applicable (aerosol)
Flash Point: not applicable (aerosol)
Autoignition Point: not determined
Flammability Class: not applicable (aerosol)

Lower Explosive Limit: not determined
Upper Explosive Limit: not determined
Vapor pressure: 5,716 hPa
Vapor density: not determined
Evaporation Rate: not determined
VOCs (per EPA Method 24): none
Relative density (H2O): approx. 1.03
Solubility (H2O): reactive
Oil-water partition coefficient: not determined
Decomposition temperature: not determined
Viscosity: not determined

10. STABILITY AND REACTIVITY

Stability: Stable
Reactivity: May react with water and incompatible materials
Hazardous Polymerization: May occur at temperatures >392°F./200°C.
Risk of Dangerous Reactions: None reasonably foreseeable
Incompatible Materials: Water, alcohols, acids, alkalis, and amines
Potential Decomposition Byproducts: Carbon monoxide, carbon dioxide, nitrogen oxides, isocyanates, and hydrogen cyanide

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Ingredients Toxicology Data</th>
<th>LD&lt;sub&gt;50&lt;/sub&gt; Oral</th>
<th>LD&lt;sub&gt;50&lt;/sub&gt; Dermal</th>
<th>LC&lt;sub&gt;50&lt;/sub&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>4,4’-Methylenediphenyl Disocyanate</td>
<td>&gt;5,000 mg/kg (rat)</td>
<td>No data available</td>
<td>2.24 mg/l. for 1 hour (rat)</td>
</tr>
<tr>
<td>Diphenylmethane Diisocyanate, Isomers and Homologues</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
</tr>
<tr>
<td>1,1,1,2-Tetrafluoroethane</td>
<td>No data available</td>
<td>No data available</td>
<td>&gt;2,300 mg/l. (rat)</td>
</tr>
</tbody>
</table>

Primary Route(s) of Entry: Inhalation; ingestion
Eye Hazards: This product may cause moderate to severe eye irritation.
Skin Hazards: This product may cause mild to moderate skin irritation and has the potential to cause skin sensitization among susceptible individuals.
Ingestion Hazards: The product is nontoxic by ingestion, but ingestion may cause nausea, vomiting, and/or gastrointestinal irritation.
Inhalation Hazards: Inhalation of toxicologically-significant quantities of ingredients is unlikely when the product is used in a well-ventilated area and in accordance with instructions.
Symptoms Related to Overexposure: Inhalation overexposure to isocyanates may cause respiratory irritation, breathing difficulties, and asthma-like symptoms.
11. TOXICOLOGICAL INFORMATION (continued)

Delayed Effects from Long Term Overexposure: Long-term inhalation overexposure to this product may result in respiratory sensitization, which may be irreversible.

Carcinogenicity: A single inhalation study exposing rats to aerosolized polymeric 4,4’-Methylene-diphenyl Diisocyanate identified a single malignant pulmonary tumor among sixty animals exposed at the highest exposure level. Observations of pulmonary fibrosis and other pathological anomalies in the test animals precluded definitive determination as to the cause(s) of the tumor. Epidemiological studies of humans occupationally exposed to the isocyanates in this product have found no strong association or consistent pattern with respect to carcinogenicity.

Germ Cell Mutagenicity: No ingredients have been determined to be germ cell mutagens.

Reproductive Toxicity: No ingredients have been determined to be damaging to fertility or to the unborn child.

Acute Toxicity Estimates: LD₅₀ (oral): no data available
LD₅₀ (dermal): no data available
LC₅₀: no data available

Interactive Effects of Components: No data available

12. ECOLOGICAL INFORMATION

4,4’-Methylene-diphenyl Diisocyanate
Aquatic Toxicity to Fish: LC₅₀ >1,000 mg/l. for 96 h. (zebra fish)
Aquatic Toxicity to Invertebrates: EC₅₀ >1,000 mg/l. for 24 h. (daphnia)
Aquatic Toxicity to Plants: EC₅₀ >1,640 mg/l. for 72 h. (algae)
Aquatic Toxicity to Microorganisms: EC₅₀ >100 mg/l. for 3 h. (bacteria)
Toxicity to Terrestrial Organisms: EC₅₀ = 1,000 mg/kg for 14 d. (worms)
No data available for Persistence and Degradability, Bioaccumulation Potential, or Mobility in Soil.

Diphenylmethane Diisocyanate, Isomers and homologues
No data available for Aquatic Toxicity to Fish, Invertebrates, Plants, or Microorganisms, Toxicity to Terrestrial Organisms, Persistence and Degradability, Bioaccumulation Potential, or Mobility in Soil.

1,1,1,2-Tetrafluoroethane
Aquatic Toxicity to Fish: LC₅₀ = 450 mg/l. for 96 h. (rainbow trout)
Aquatic Toxicity to Invertebrates: EC₅₀ = 950 mg/l. for 48 h. (daphnia)
Aquatic Toxicity to Plants: EC₅₀ = 118 mg/l. for 72 h. (algae)
No data available for Aquatic Toxicity to Microorganisms, Toxicity to Terrestrial Organisms, Persistence and Degradability, Bioaccumulation Potential, or Mobility in Soil.

Ozone Depletion Potential: This product neither contains nor is manufactured with any ingredients known to deplete the ozone layer.
13. DISPOSAL CONSIDERATIONS

Do not discharge waste product into sanitary or storm sewers or allow it to contaminate soil. Empty containers should be decontaminated prior to disposal. Consult applicable Federal, State/Provincial, and local regulations.

14. TRANSPORTATION INFORMATION

Proper Shipping Name: Chemical Under Pressure, n.o.s.  
(contains fluorinated hydrocarbon, nitrogen)  
Identification Number: UN3500  
Hazard Class: 2.2  
Packing Group: not applicable

15. REGULATORY INFORMATION

**United States Regulatory Information**

TSCA Information: All ingredients of this product are listed in the TSCA Registry.

SARA Hazard Classes: Acute Health Hazard, Chronic Health Hazard, Reactivity Hazard

EPCRA Section 313 Notification: This product contains these ingredients in concentrations ≥1% (for carcinogens ≥0.1%) regulated under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 or 40 CFR 372:

1. 4,4’-Methylene Diphényl Diisocyanate (CASRN 101-68-8)
2. Diphenylmethane Diisocyanate, Isomers and Homologues (CASRN 9016-87-9)

CERCLA Information: Under requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), 4,4’-Methylene Bisphenyl Isocyanate (CASRN 101-68-8) has a Reportable Quantity of 5,000 lbs. Any spill or release above this RQ must be reported to the National Response Center (800-424-8802).

**Canadian Regulatory Information**

All ingredients in this product are listed in the Domestic Substances List (DSL) or the Nondomestic Substances List (NDSL).

This product has been classified in accordance with Canada’s Hazardous Products Regulations (SOR/DORS/2015-15).

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>Hazardous Materials Information System (HMIS III) Ratings (Legend):</th>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard</th>
<th>PPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health</td>
<td>2*</td>
<td>0</td>
<td>1</td>
<td>See Note</td>
</tr>
<tr>
<td>Health (moderate hazard, “*” indicating potential for chronic effects)</td>
<td>Flammability (minimal hazard)</td>
<td>Physical Hazard (slight hazard)</td>
<td>PPE See Note</td>
<td></td>
</tr>
</tbody>
</table>
16. OTHER INFORMATION (continued)

Note regarding PPE: Siplast recommends use of protective eyewear and skin protection (Personal Protection Index "B") as standard PPE for the anticipated conditions of use of this product. However, HMIS recommends that its ratings be used only in conjunction with a fully implemented HMIS program, and that specific PPE codes should be created by the user, who is familiar with the actual conditions under which the product is used. We cannot anticipate every condition of the product's use, and it is the user's responsibility to evaluate the hazards pertinent to its specific operations, and to determine the specific PPE required.

<table>
<thead>
<tr>
<th>National Fire Protection Association (NFPA) Ratings:</th>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2</td>
<td>0</td>
<td>1</td>
</tr>
</tbody>
</table>

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SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: Parafast Insulation Adhesive T Part 2
Supplier: Siplast
1000 Rochelle Blvd.
Irving, TX  75062
TEL:  800-922-8800
www.siplast.com

24-hour Emergency Response Number:
Chemtrec: 800-424-9300

Product Use(s): One component of a two-component polyurethane system

2. HAZARDS IDENTIFICATION

Classifications:
- Eye Irritation: Hazard Category 2B
- Specific Target Organ Toxicity, Repeated Exposure: Hazard Category 2
- Gases Under Pressure: Compressed Gas
- Physical Hazards Not Otherwise Classified: None
- Health Hazards Not Otherwise Classified: None

Symbols:
- Health Hazard
- Exclamation Point
- Gas Cylinder

Signal Word: Warning

Hazard Statements:
- May cause eye irritation.
- May cause damage to the kidneys and/or gastrointestinal system through prolonged or repeated exposure.
- Contains gas under pressure; may explode if heated.

Precautionary Statements:
- Do not breathe mist, spray, or vapors.
- Wash hands and forearms thoroughly after handling.
- Get medical advice/attention if you feel unwell.
- Protect from sunlight. Store in a well-ventilated place.

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.

Dispose of contents/container in accordance with applicable regulations.

EMERGENCY OVERVIEW

Eye contact with this product may cause irritation. Chronic ingestion may damage the kidneys and/or gastrointestinal system. There are no known serious health effects from inhalation or skin contact. See Section #7 for recommendations on proper handling and work practices, and Section #8 for recommendations on personal protective equipment.
EMERGENCY OVERVIEW (continued)

This product is formulated to be mixed with another component (Parafast Insulation Adhesive T, Part 1) that, if handled improperly, may cause potentially serious health effects such as respiratory irritation, asthma-like symptoms, and/or respiratory sensitization. Do not handle or mix the two components together until you have read and understood that information in the Safety Data Sheets for both components.

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS Number</th>
<th>Percentage</th>
<th>Impurities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylene Glycol</td>
<td>111-46-6</td>
<td>&lt;15</td>
<td>None known</td>
</tr>
<tr>
<td>Dipropylene Glycol</td>
<td>25265-71-8</td>
<td>&lt;15</td>
<td>None known</td>
</tr>
<tr>
<td>1,1,1,2-Tetrafluoroethane</td>
<td>811-97-2</td>
<td>10-15</td>
<td>None known</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Eyes: Hold eyes open and flush with lukewarm water for at least 15 minutes. Seek immediate medical assistance.

Skin: Remove contaminated clothing. Wash affected areas with soap and water for at least five minutes. If irritation occurs or persists, seek medical attention. Launder or dry-clean clothing before reuse.

Ingestion: DO NOT induce vomiting. If the subject is conscious, wash mouth and give 2 or more cups of milk or water. Seek immediate medical assistance. Do not attempt to give anything by mouth to an unconscious or convulsive person.

Inhalation: If signs and symptoms of respiratory toxicity are observed, remove subject from area and seek immediate medical attention. Keep the subject warm and at rest. If necessary, administer oxygen or perform artificial respiration if necessary and qualified personnel are available to do so.

Guidance for Physician or Poison Control Center: None of the components of this product are acutely toxic by ingestion or inhalation. Eye contact can cause mild to moderate irritation. Skin contact can cause mild irritation. Ingestion is unlikely to occur in industrial use, but if ingestion occurs it may cause nausea, vomiting, and gastrointestinal irritation. Chronic ingestion can cause kidney injury.

5. FIREFIGHTING MEASURES

Extinguishing Media: Water spray, carbon dioxide, dry chemical or chemical foam. DO NOT use water jet.

Fire and Explosion Hazards: The container may burst if exposed to elevated temperatures, spilling the contents. This product may ignite if exposed to sources of ignition at temperatures above its flash point. If present in a fire or explosion, potential thermal decomposition byproducts include carbon monoxide, smoke, and irritant decomposition byproducts.
5. FIREFIGHTING MEASURES (continued)

Firefighting Instructions: If fighting a fire in which this product is present, wear a self-contained breathing apparatus with full-facepiece operated in pressure-demand or other positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Methods and Materials: Absorb spilled material with a sorbent such as sawdust, vermiculite, or calcium silicate hydrate. When absorbed, transfer to an impervious container.

Personal Precautions: Avoid contact with skin, eyes, and mucous membranes. Wear appropriate personal protective equipment (see Section #8) during cleanup and decontamination.

Environmental Precautions: Prevent spills from entering sewers or contaminating soil.

7. HANDLING AND STORAGE

Handling Precautions: Containers should be kept tightly closed to prevent contact with moisture and other chemicals. Do not reuse empty containers for any purpose. When handling the product, avoid contact with eyes, skin, and clothing, using protective equipment as needed. Do not use this product around children, and secure it away from children.

Work and Hygiene Practices: To prevent ingestion or contact following use of the product, wash hands and face before eating, drinking, applying cosmetics, or using tobacco. Remove contaminated clothing and protective equipment before entering eating/drinking areas.

Storage Precautions: Store containers tightly sealed in a dry, well-ventilated, area away from incompatible materials (see Section #10). Recommended temperature range for storage is 55-85°F. (12.8-29.4°C.).

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

Ingredients Exposure Limits:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylene Glycol</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>Dipropylene Glycol</td>
<td>None</td>
<td>None</td>
</tr>
<tr>
<td>1,1,1,2-Tetrafluoroethane</td>
<td>None</td>
<td>None</td>
</tr>
</tbody>
</table>

Ingredients Biological Limits:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Biological Limit(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylene Glycol</td>
<td>No ACGIH BEIs or other biological limits</td>
</tr>
<tr>
<td>Dipropylene Glycol</td>
<td>No ACGIH BEIs or other biological limits</td>
</tr>
<tr>
<td>1,1,1,2-Tetrafluoroethane</td>
<td>No ACGIH BEIs or other biological limits</td>
</tr>
</tbody>
</table>
8. EXPOSURE CONTROLS AND PERSONAL PROTECTION (continued)

Engineering Controls: Use appropriate ventilation (dilution or local exhaust) whenever this product is used in conjunction with Parafast Insulation Adhesive T, Part 1 in conditions where natural ventilation is restricted.

Eye/Face Protection: Wear eye protection adequate to prevent eye contact with the product. Plastic-frame spectacles with side shields, chemical goggles, or a face shield are recommended. Do not wear contact lenses when working with this product.

Skin Protection: Wear protective gloves and clothing to prevent skin irritation or injury from contact with the product. Glove materials known to be effective against permeation by this product include butyl rubber, nitrile rubber, and polyvinyl alcohol.

Respiratory Protection: If an exposure level to a component exceeds an applicable standard, use a NIOSH-approved respirator of a class and configuration effective for protection from the component(s) generated. Consult OSHA regulations (29CFR1910.134) and/or American National Standard Z88.2 (ANSI, New York, NY 10036, USA) for guidance.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>red viscous liquid</td>
</tr>
<tr>
<td>Odor</td>
<td>mildly sweet</td>
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<td>Odor threshold</td>
<td>not determined</td>
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<tr>
<td>pH</td>
<td>not determined</td>
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<td>Melting point</td>
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</tr>
<tr>
<td>Freezing point</td>
<td>not determined</td>
</tr>
<tr>
<td>Boiling point</td>
<td>not determined</td>
</tr>
<tr>
<td>Boiling range</td>
<td>not applicable (aerosol)</td>
</tr>
<tr>
<td>Flash Point</td>
<td>not applicable (aerosol)</td>
</tr>
<tr>
<td>Autoignition Point</td>
<td>not determined</td>
</tr>
<tr>
<td>Flammability Class</td>
<td>not applicable (aerosol)</td>
</tr>
<tr>
<td>Lower Explosive Limit</td>
<td>not determined</td>
</tr>
<tr>
<td>Upper Explosive Limit</td>
<td>not determined</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>&gt;200 psi</td>
</tr>
<tr>
<td>Vapor density</td>
<td>not determined</td>
</tr>
<tr>
<td>Evaporation Rate</td>
<td>not determined</td>
</tr>
<tr>
<td>VOCs (per EPA Method 24)</td>
<td>not determined</td>
</tr>
<tr>
<td>Relative density (H2O)</td>
<td>approx. 1.03</td>
</tr>
<tr>
<td>Solubility (H2O)</td>
<td>partial</td>
</tr>
<tr>
<td>Oil-water partition coefficient</td>
<td>not determined</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>not determined</td>
</tr>
<tr>
<td>Viscosity</td>
<td>not determined</td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stability</td>
<td>Stable</td>
</tr>
<tr>
<td>Reactivity</td>
<td>Polymerizes with isocyanate-containing substances</td>
</tr>
<tr>
<td>Hazardous Polymerization</td>
<td>Will not occur</td>
</tr>
<tr>
<td>Risk of Dangerous Reactions</td>
<td>None reasonably foreseeable</td>
</tr>
<tr>
<td>Incompatible Materials</td>
<td>Oxidizing agents</td>
</tr>
<tr>
<td>Potential Decomposition</td>
<td>Carbon monoxide, carbon dioxide, smoke, and irritant</td>
</tr>
<tr>
<td>Byproducts</td>
<td>decomposition byproducts</td>
</tr>
</tbody>
</table>
SAFETY DATA SHEET

11. TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Toxicology Data</th>
<th>LD50 Oral</th>
<th>LD50 Dermal</th>
<th>LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylene Glycol</td>
<td></td>
<td>14,850 mg/kg (rat)</td>
<td>11,890 mg/kg (hamster)</td>
<td>No data available</td>
</tr>
<tr>
<td>Dipropylene Glycol</td>
<td></td>
<td>12,565 mg/kg (rat)</td>
<td>&gt;20,000 mg/kg (rabbit)</td>
<td>No data available</td>
</tr>
<tr>
<td>1,1,1,2-Tetrafluoroethane</td>
<td>No data available</td>
<td>No data available</td>
<td>No data available</td>
<td>&gt;2,300 mg/l. (rat)</td>
</tr>
</tbody>
</table>

Primary Route(s) of Entry:
- Inhalation; ingestion

Eye Hazards:
- This product may cause mild to moderate eye irritation.

Skin Hazards:
- This product may cause mild skin irritation. Irritation may be more pronounced on abraded skin.

Ingestion Hazards:
- The product is nontoxic by ingestion, but ingestion may cause nausea, vomiting, and/or gastrointestinal irritation.

Inhalation Hazards:
- Inhalation of toxicologically-significant quantities of ingredients is unlikely when the product is used in a well-ventilated area and in accordance with instructions.

Symptoms Related to Overexposure:
- Inhalation overexposure may cause respiratory irritation.

Delayed Effects from Long Term Overexposure:
- Long-term chronic ingestion may damage the kidneys and the gastrointestinal system.

Carcinogenicity:
- No ingredients are classified as potential or confirmed human carcinogens by OSHA, NTP, or IARC.

Germ Cell Mutagenicity:
- No ingredients have been determined to be germ cell mutagens.

Reproductive Toxicity:
- No ingredients have been determined to be damaging to fertility or to the unborn child.

Acute Toxicity Estimates:
- LD50 (oral): >10,000 mg/kg
- LD50 (dermal): >10,000 mg/kg
- LC50: no data available

Interactive Effects of Components:
- No data available

12. ECOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Ingredients</th>
<th>Ecological Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diethylene Glycol</td>
<td>No data available for Aquatic Toxicity to Fish, Invertebrates, Plants, or Microorganisms, Toxicity to Terrestrial Organisms, Persistence and Degradability, Bioaccumulation Potential, or Mobility in Soil.</td>
</tr>
<tr>
<td>Dipropylene Glycol</td>
<td>No data available for Aquatic Toxicity to Fish, Invertebrates, Plants, or Microorganisms, Toxicity to Terrestrial Organisms, Persistence and Degradability, Bioaccumulation Potential, or Mobility in Soil.</td>
</tr>
</tbody>
</table>
12. ECOLOGICAL INFORMATION (continued)

1,1,1,2-
Tetrafluoroethane  Aquatic Toxicity to Fish: LC$_{50}$ = 450 mg/l. for 96 h. (rainbow trout)
Aquatic Toxicity to Invertebrates: EC$_{50}$ = 950 mg/l. for 48 h. (daphnia)
Aquatic Toxicity to Plants: EC$_{50}$ = 118 mg/l. for 72 h. (algae)
No data available for Aquatic Toxicity to Microorganisms, Toxicity to Terrestrial Organisms, Persistence and Degradability, Bioaccumulation Potential, or Mobility in Soil.

Ozone Depletion Potential: This product neither contains nor is manufactured with any ingredients known to deplete the ozone layer.

13. DISPOSAL CONSIDERATIONS

Do not discharge waste product into sanitary or storm sewers or allow it to contaminate soil. Empty containers should be decontaminated prior to disposal. Consult applicable Federal, State/Provincial, and local regulations.

14. TRANSPORTATION INFORMATION

Proper Shipping Name: Chemical Under Pressure, n.o.s.
(contains fluorinated hydrocarbon, nitrogen)
Identification Number: UN3500
Hazard Class: 2.2
Packing Group: not applicable

15. REGULATORY INFORMATION

United States Regulatory Information
TSCA Information: All ingredients of this product are listed in the TSCA Registry.
SARA Hazard Classes: Acute Health Hazard, Chronic Health Hazard
EPCRA Section 313 Notification: This product contains no ingredients in concentrations $\geq$1% ($\geq$0.1% for carcinogens) regulated under Section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 or 40 CFR 372.

Canadian Regulatory Information
All ingredients in this product are listed in the Domestic Substances List (DSL) or the Nondomestic Substances List (NDSL).
This product has been classified in accordance with Canada’s Hazardous Products Regulations (SOR/DORS/2015-15).
### SAFETY DATA SHEET

#### 16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>Hazardous Materials Information System (HMIS III) Ratings</th>
<th>Health</th>
<th>Flammability</th>
<th>Physical Hazard</th>
<th>PPE</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Legend):</td>
<td>1</td>
<td>1</td>
<td>0</td>
<td>See</td>
</tr>
<tr>
<td></td>
<td>(slight hazard)</td>
<td>(slight hazard)</td>
<td>(minimal hazard)</td>
<td>Note</td>
</tr>
</tbody>
</table>

**Note regarding PPE:** Siplast recommends use of protective eyewear and skin protection (Personal Protection Index "B") as standard PPE for the anticipated conditions of use of this product. However, HMIS recommends that its ratings be used only in conjunction with a fully implemented HMIS program, and that specific PPE codes should be created by the user, who is familiar with the actual conditions under which the product is used. We cannot anticipate every condition of the product's use, and it is the user's responsibility to evaluate the hazards pertinent to its specific operations, and to determine the specific PPE required.

<table>
<thead>
<tr>
<th>National Fire Protection Association (NFPA) Ratings:</th>
<th>Health</th>
<th>Flammability</th>
<th>Reactivity</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
</tbody>
</table>

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