SDS# 995
Date: February 12, 2018

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Flex Inject® Sealant Total

SECTION 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product Name: Flex Inject® Sealant Total All Systems up to 6 Tons
Catalog Number: 995
Product Class: HVAC/R refrigerant additive
Manufactured by: DiversiTech Corporation
6650 Sugarloaf Parkway
Duluth, GA, 30097
Information Phone No.: 1+678.542.3600
EMERGENCY Phone No.: 1 800.255.3924 Chem-Tel (Chemical Emergencies)

SECTION 2. HAZARDOUS IDENTIFICATION

Hazards Classification
Flammable liquids: Category 3
Serious eye damage/irritation: Category 2
Specific Target Organ Toxicity (Repeat Exposure): Category 2
Skin Sensitization: Category 1

Label Elements:



Signal Word: Warning

Hazard Statement(s):
Flammable liquid and vapor
Causes serious eye irritation
May cause an allergic skin reaction
May cause damage to organs through repeated or prolonged exposure (bladder)

Precautionary Statement(s):
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Wear protective gloves and eye protection.
Wash hands thoroughly after handling.
Do not breathe mist, vapor or spray.
Contaminated clothing should not be allowed out of the workplace.

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
In case of fire: Use carbon dioxide, dry chemical powder, alcohol-resistant foam or water spray to extinguish.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical attention.
If skin irritation or rash occurs: Get medical attention.
Specific treatments: see first aid measures on this label.
Take off contaminated clothing and wash it before reuse.
Get medical attention if you feel unwell.
Dispose of contents/container in accordance with local/regional/national regulations.

Other hazards:
None known.

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SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

INGREDIENT	CAS No.	Composition, wt%
Triethylorthoformate	122-51-0	7 - 13
Trimethoxyvinylsilane	2768-02-7	1 - <3
N-(3-(trimethoxysilyl)propyl) ethylenediamine	1760-24-3	1 - <3
Trimethoxy(methyl)silane	1185-55-3	0.1 – 1

Remaining components of this product are not classified as hazardous under WHMIS 2015.

SECTION 4. FIRST AID MEASURES

Inhalation
Remove person to fresh air. Give artificial respiration if not breathing. If breathing is difficult, oxygen may be given by qualified personnel. Obtain medical attention.

Ingestion
Do NOT induce vomiting. Wash out mouth with water provided person is conscious. Call a physician.

Skin Contact
Immediately wash skin with soap and plenty of water. If irritation persists or if contact has been prolonged, obtain medical attention. Wash contaminated clothing before reuse.

Eye Contact
Remove contact lenses and immediately flush eyes with copious amounts of water for at least 15 minutes. Obtain medical attention.

Acute and Delayed Symptoms
This product is expected to react with moisture in the gastrointestinal tract to form methanol. Symptoms may be delayed and include headache, dizziness, nausea, lack of coordination and confusion.

Special Treatment Needed
Get medical treatment.

SECTION 5. FIREFIGHTING MEASURES

Extinguishing media
DO NOT USE WATER STREAM. Use carbon dioxide, dry chemical powder, alcohol-resistant foam or water spray.

Special hazards arising from the substance or mixture
Vapors from this product may travel or be moved by air currents and ignited by pilot light or other flames and ignition sources at locations distant from product handling point. Burning can produce oxides of carbon, nitrogen and silicon.

Advice for firefighters
Wear self-contained breathing apparatus and protective clothing. Do not breathe fumes or vapors.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, protective equipment and emergency procedures
Clear the area of unnecessary personnel. Shut off all sources of ignition. No smoking.
Wear chemical-resistant gloves and chemical safety goggles. Ensure adequate ventilation. Avoid breathing fumes or vapors.

Environmental precautions
Avoid runoff to sewers and waterways.

Methods and materials for containment and cleaning up
Cover spill with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

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SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling
Do not breathe vapor. Wear chemical-resistant gloves and chemical safety goggles. Avoid contact with eyes, skin, and clothing.

Conditions for Safe Storage
This product should be stored and handled in closed equipment to keep vapors in and moisture out. When this is done, general room ventilation is expected to be satisfactory. Keep away from sparks, open flame or other sources of ignition.

SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Control Parameters

COMPONENT	CAS No.	VALUE	CONTROL PARAMETERS
Trimethoxyvinylsilane	2768-02-7	Ontario OEL	10 ppm 60 mg/m3

Engineering Controls
Have eyewash available. General room ventilation is expected to be sufficient for use of the product.

Protective Equipment
Wear chemical-resistant gloves and chemical safety goggles or safety glasses with side shields and chemical protective clothing.

Hygiene
Practice good industrial hygiene. Wash hands thoroughly after handling. Contaminated clothing should not be allowed out of the workplace. Wash contaminated clothing before re-use.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear yellow liquid
Odor: Ethereal
Odor Threshold: No data available
pH @ 25°C: No data available
Melting Point/Freezing Point: No data available
Boiling Point: No data available
Flash Point: 49°C (120°F)
Evaporation Rate: No data available
Flammable or Explosive Limits: No data available
Vapor pressure (mm Hg): No data available
Vapor Density: No data available
Density: 0.95 g/cm3 @ 25°C (77°F)
Solubility in water: No data available
Octanol/Water Partition Coefficient: No data available
Autoignition Temperature: No data available
Decomposition Temperature: No data available
Viscosity: No data available

SECTION 10. STABILITY AND REACTIVITY

Reactivity: Reacts with water.
Chemical Stability: Stable under recommended storage conditions.
Possibility of Hazardous Reactions: Unlikely
Conditions to Avoid: Moisture, heat, flames and sparks
Incompatible Materials: Acids, strong oxidizing agents
Hazardous Decomposition Products: Reacts with water or moisture to form methanol.

SECTION 11. TOXICOLOGICAL INFORMATION

Information on the likely routes of exposure
Inhalation: May be harmful if inhaled.
Ingestion: Not a likely route of exposure. May be harmful if swallowed.
Skin Contact: May cause an allergic skin reaction.
Eye Contact: Causes serious eye irritation

Symptoms related to physical, chemical and toxicological characteristics
Inhalation: Symptoms of exposure may include headache and dizziness.
Ingestion: Irritation of mucous membranes.
Skin Contact: Repeated or prolonged exposure may cause an allergic skin reaction.
Eye Contact: Symptoms may include watering or redness.

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SECTION 11. TOXICOLOGICAL INFORMATION (cont.)

Delayed and immediate effects

No additional information

Chronic effects from short-term and long-term exposure
May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur on subsequent exposures.

Numerical measures of toxicity

The toxicological properties of this product have not been investigated.
Information for hazardous components is provided below.

Acute toxicity

Oral LD50 rat:	Triethylorthoformate: 7060 mg/kg Trimethoxyvinylsilane: >7000 mg/kg N-(3-(trimethoxysilyl)propyl)ethylenediamine: 8000 mg/kg Trimethoxy(methyl)silane: 11,685 mg/kg
Inhalation LC50 rat: 4 h	Trimethoxyvinylsilane: 16.4-17.8 mg/l N-(3-(trimethoxysilyl)propyl)ethylenediamine: 1.49-2.44 mg/l Trimethoxy(methyl)silane: >42.1 mg/l
Skin LD50 rabbit:	Triethylorthoformate – 17820 mg/kg Trimethoxyvinylsilane: 4000 mg/kg N-(3-(trimethoxysilyl)propyl)ethylenediamine: >2000 mg/kg
Skin LD50 guinea pig:	Triethylorthoformate - >8910 mg/kg
Skin LD50 rat:	Trimethoxy(methyl)silane: >9,500 mg/kg

Skin corrosion/irritation

Rabbit:	Triethylorthoformate – slightly irritating Trimethoxyvinylsilane: no irritation Trimethoxy(methyl)silane: no irritation

Serious eye damage/irritation

Rabbit:	Triethylorthoformate – no irritation N-(3-(trimethoxysilyl)propyl)ethylenediamine: corrosive to eyes Trimethoxy(methyl)silane: no eye irritation

Respiratory or skin sensitization

Guinea pig:	Trimethoxyvinylsilane - did not cause sensitization N-(3-(trimethoxysilyl)propyl)ethylenediamine - may cause sensitization by skin contact Trimethoxy(methyl)silane – did not cause sensitization

Carcinogenicity
None of the components of this product is identified as a carcinogen by IARC, ACGIH, NTP or OSHA.

Specific target organ toxicity – repeat exposure

Rabbit:	Trimethoxyvinylsilane: Target organ - bladder

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SECTION 12. ECOLOGICAL INFORMATION

No data are available for the ecological effects of this product. Information for some components is provided below.

Toxicity to fish:

Triethylorthoformate
LC50 – 48 h
Species: Leuciscus idus
Result: 592 mg/l

Trimethoxyvinylsilane
LC50 – 96 h
Species: Brachydanio
Result: >100 mg/l

Trimethoxyvinylsilane
LC50 – 96 h
Species: Oncorhynchus mykiss
Result: >191 mg/l

N-(3-(trimethoxysilyl)propyl)ethylenediamine
LC50
Species: Lepomis macrochirus
Result: >100 mg/l

Toxicity to other organisms:

Triethylorthoformate
EC50 – 48 h
Species: Daphnia magna
Result: 617 mg/l

Trimethoxyvinylsilane
EC50 – 48 h
Species: Daphnia magna
Result: >100 mg/l

N-(3-(trimethoxysilyl)propyl)ethylenediamine
EC50 – 48 h
Species: Daphnia magna
Result: 87.4 mg/l

Toxicity to algae: Trimethoxyvinylsilane
EC50 – 72 h
Species: Desmodesmus subspicatus
Result: >100 mg/l
N-(3-(trimethoxysilyl)propyl)ethylenediamine
EC50 - 96 h
Species: Pseudokirchneriella subcapitata
Result: 8.8 mg/l

N-(3-(trimethoxysilyl)propyl)ethylenediamine
NOEC
Species: Pseudokirchneriella subcapitata
Result: 3.1 mg/l

Toxicity to microorganisms:

Trimethoxyvinylsilane
NOEC
Species: Bacteria
Result: >1000 mg/l
Exposure time: 3 h

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SECTION 12. ECOLOGICAL INFORMATION (cont.)

Persistence and degradability
Triethylorthoformate: Readily biodegradable.

The silane components of the product degrade through hydrolysis into alcohols and silanol and/or siloxanol compounds. These components are not expected to be readily biodegradable.

Bioaccumulative potential
No data available

Mobility in soil
No data available

Other adverse effects
No data available

SECTION 13. DISPOSAL CONSIDERATIONS

Product
Contact a licensed professional waste disposal service to dispose of this material. Observe all local, state, provincial and national requirements.

Contaminated packaging
Dispose of as product.

SECTION 14. TRANSPORTATION INFORMATION

TDG/IATA/IACO/IMDG
Shipping Name: FLAMMABLE LIQUID, N.O.S. (ethyl orthoformate)
UN #: 1993
Class: 3
Packing Group: III

SECTION 15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act (SARA) Title III Information: SARA Section 311/312 (40 CFR 370)
Immediate Hazard: Yes, Flammable liquids category 3, Serious eye damage/irritation category 2
Delayed Hazard: Yes, Skin sensitization category 1, Specific target organ toxicity (repeat exposure) category 2
Fire Hazard: Yes, Category 3
Pressure Hazard: No
Reactivity Hazard: Low risk for hazardous reactions

SARA Section 313 (40 CFR 372) component
This material does not contain any chemical components with known CAS numbers that exceed the De Minimis reporting levels established by SARA Title III, Section 313 and 40 CFR 372.

State Regulations – California Proposition 65:
This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins under at levels which would be subject to the proposition.

Toxic Substances Control Act (TSCA):
All components of this product are included on the TSCA inventory.

International Regulations

Canadian Environmental Protection Act (DSL)
All products are on the Canadian Domestic Substance List (DSL)

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SECTION 15. REGULATORY INFORMATION (cont.)

Canadian Workplace Hazardous Materials Information System (WHMIS)
Flammable liquids: Category 3
Serious eye damage/irritation: Category 2
Specific Target Organ Toxicity (Repeat Exposure): Category 2
Skin Sensitization: Category 1

SECTION 16. OTHER INFORMATION INCLUDING INFORMATION ON PREPARATION AND REVISION OF THE SDS

All information appearing herein is based upon data obtained from manufacturers and/or recognized technical sources. While the information is believed to be accurate, we make no representations as to its accuracy or sufficiency. Conditions of use are beyond our control, therefore users are responsible for verifying the data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling, and disposal of the product. Users also assume all risks in regards to the publications of use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or process.