

# MATERIAL SAFETY DATA SHEET



Date Issued: 04/24/2012  
MSDS No: 1583-A

## Eco-Freezer

### 1. PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Eco-Freezer  
**PRODUCT DESCRIPTION:** Diagnostic Freeze Spray  
**PRODUCT CODE:** 1583-10S

#### MANUFACTURER

Techspray, L.P.  
1001 N.W. 1st Street  
P.O. Box 949  
Amarillo, TX 79107

**Emergency Contact:** Chemtrec  
**Emergency Phone:** 1-800-858-4043  
**Service Number:** 1-800-858-4043

#### 24 HR. EMERGENCY TELEPHONE NUMBERS

**CHEMTREC CCN#21858 (US Transportation) :**(800) 424 - 9300  
**CANUTEC (Canadian Transportation) :**(613) 996 - 6666  
**Emergency Phone :**(800) 858 - 4043

### 2. HAZARDS IDENTIFICATION

#### EMERGENCY OVERVIEW

**PHYSICAL APPEARANCE:** Liquefied gas, colorless, slight odor

**IMMEDIATE CONCERNS:** Warning! High concentrations of vapor can reduce oxygen available for breathing. Harmful if inhaled. May decompose on contact with flames or extremely hot metal surfaces to produce toxic and corrosive products.

#### POTENTIAL HEALTH EFFECTS

**EYES:** Liquid contact can cause irritation, which may be severe.

**SKIN:** Prolonged or repeated contact can result in defatting and drying of the skin which may result in skin irritation and dermatitis (rash). Liquid contact could cause frostbite.

**INGESTION:** Not likely to be ingested.

**INHALATION:** May cause central nervous system effects, cardiac arrhythmia, drowsiness and dizziness.

#### SIGNS AND SYMPTOMS OF OVEREXPOSURE

**EYES:** Can cause severe eye irritation.

**SKIN:** Exposure to rapidly expanding gas or vaporizing liquid may cause frostbite ("cold" burn).

**INGESTION:** Not a likely route of exposure.

**INHALATION:** High concentrations may lead to central nervous system effects (drowsiness, dizziness, nausea, headaches, paralysis and loss of consciousness).

**ACUTE TOXICITY:** Overexposure may cause dizziness and loss of concentration. At higher levels, CNS depression and cardiac arrhythmia may result.

**CHRONIC EFFECTS:** None known.

**MUTAGENICITY:** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP, IARC, or OSHA.

### 3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt. %	CAS
trans-1,3,3,3-tetrafluoroprop-1-ene	100	29118-24-9

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### 4. FIRST AID MEASURES

**EYES:** Immediately flush eyes with plenty of water. Get medical attention, if irritation persists.

**SKIN:** In case of cold burns (frostbite) caused by rapidly expanding gas or vaporizing liquids, get medical attention promptly.

**INGESTION:** Ingestion is unlikely because of the physical properties and is not expected to be hazardous. Do not induce vomiting unless instructed to do so by a physician.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

### 5. FIRE FIGHTING MEASURES

**FLASHPOINT AND METHOD:** None

**FLAMMABLE LIMITS:** Product exhibits flame limits at temperatures in excess of 28 C.

**AUTOIGNITION TEMPERATURE:** 368°C (694°F)

**FLAMMABLE CLASS:** Not Applicable

**FLAME PROPAGATION OR BURNING RATE OF SOLIDS:** Not Applicable

**EXTINGUISHING MEDIA:** Foam, carbon dioxide, dry chemical

**EXPLOSION HAZARDS:** This product is not flammable at ambient temperatures and atmospheric pressure. However, this material may become combustible when mixed with air under pressure and exposed to strong ignition sources.

**FIRE FIGHTING PROCEDURES:** Use water spray to cool containers.

**FIRE FIGHTING EQUIPMENT:** As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Some risk may be expected of corrosive and toxic decomposition products. Fire may cause evolution of hydrogen fluoride.

### 6. ACCIDENTAL RELEASE MEASURES

**GENERAL PROCEDURES:** Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

**RELEASE NOTES:** Spills and releases may have to be reported to Federal and/or local authorities.

### 7. HANDLING AND STORAGE

**HANDLING:** Follow standard safety precautions for handling and use of compressed gas cylinders.

**STORAGE:** Store in a cool place in original container and protect from sunlight.

**STORAGE TEMPERATURE:** Contents under pressure. Do not expose to heat or store above (120) F (49) C.

### 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**ENGINEERING CONTROLS:** Local exhaust ventilation may be necessary to control any air contaminants to within their TLVs during the use of this product.

#### PERSONAL PROTECTIVE EQUIPMENT

**EYES AND FACE:** Wear safety glasses with side shields (or goggles) and a face shield.

**SKIN:** Skin contact with liquid may cause frostbite. General work clothing and gloves (leather) should provide adequate protection. If prolonged contact with the liquid or gas is anticipated, insulated gloves constructed of PVA, neoprene or butyl rubber should be used. Any contaminated clothing should be promptly removed and

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washed before reuse.

**RESPIRATORY:** A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**PHYSICAL STATE:** Gas

**ODOR:** Faint ethereal odor

**pH:** Neutral

**PERCENT VOLATILE:** 100 at 20°C (68°F)

**VAPOR PRESSURE:** 60.799 psi at 20°C (68°F)

**VAPOR DENSITY:** 4 (Air=1)

**BOILING POINT:** -19°C (-2°F)

**FLASHPOINT AND METHOD:** None

**SOLUBILITY IN WATER:** 0.373 g/l

**DENSITY:** 1.12 at 21.1°C (70°F)

### 10. STABILITY AND REACTIVITY

**STABLE:** Yes

**HAZARDOUS POLYMERIZATION:** No

**STABILITY:** Stable.

**POLYMERIZATION:** Will not occur.

**CONDITIONS TO AVOID:** Stable. However, may decompose if heated.

**HAZARDOUS DECOMPOSITION PRODUCTS:** When exposed to high temperatures or flames this product may form fluorocarbons and hydrogen fluoride.

**INCOMPATIBLE MATERIALS:** Incompatible with alkali or alkaline earth metals - powdered Al, Zn, Be, etc.

### 11. TOXICOLOGICAL INFORMATION

#### ACUTE

**INHALATION LC<sub>50</sub>:** > 100000 ppm, 4-hour, mouse

**CHRONIC:** HFO-1234ze repeated dose toxicity, rat, 13 weeks - NOEL 5000 ppm

#### CARCINOGENICITY

**IARC:** NOT listed

**NTP:** NOT listed

**OSHA:** NOT listed

**IRRITATION:** OECD Test guideline, Rabbit - no skin irritation

**SENSITIZATION:** Cardiac sensitization, dogs - did not cause sensitization in laboratory animals

### 12. ECOLOGICAL INFORMATION

**ENVIRONMENTAL DATA:** Aerobic degradability: Not readily biodegradable.

### 13. DISPOSAL CONSIDERATIONS

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**GENERAL COMMENTS:** Dispose of in a manner consistent with federal, state, and local regulations.

### 14. TRANSPORT INFORMATION

#### DOT (DEPARTMENT OF TRANSPORTATION)

**PROPER SHIPPING NAME:** CONSUMER COMMODITY ORM-D

**UN/NA NUMBER:** N/A

**PACKING GROUP:** NA

#### ROAD AND RAIL (ADR/RID)

**PROPER SHIPPING NAME:** Liquefied Gas, n.o.s.

**UN NUMBER:** 3163

**HAZARD CLASS:** 2.2

#### AIR (ICAO/IATA)

**SHIPPING NAME:** Liquefied Gas, n.o.s.

**TECHNICAL NAME:** trans-1,3,3,3-tetrafluoroprop-1-ene

**UN/NA NUMBER:** UN3163

**PRIMARY HAZARD CLASS/DIVISION:** 2.2

**PACKING GROUP:** NA

#### VESSEL (IMO/IMDG)

**SHIPPING NAME:** Liquefied Gas, n.o.s.

**TECHNICAL NAME:** trans-1,3,3,3-tetrafluoroprop-1-ene

**UN/NA NUMBER:** 3159

**PRIMARY HAZARD CLASS/DIVISION:** 2.2

**PACKING GROUP:** NA

**LIMITED QUANTITY:** 120mL

### 15. REGULATORY INFORMATION

#### UNITED STATES

##### SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

**311/312 HAZARD CATEGORIES:** IMMEDIATE / PRESSURE

**PRESSURE GENERATING:** Yes **ACUTE:** Yes

**313 REPORTABLE INGREDIENTS:** Not considered a SARA 313 "Toxic Chemical".

##### TSCA (TOXIC SUBSTANCE CONTROL ACT)

Chemical Name	CAS
trans-1,3,3,3-tetrafluoroprop-1-ene	29118-24-9

**TSCA REGULATORY:** This product is listed on the TSCA Inventory.

**CALIFORNIA PROPOSITION 65:** This product does not contain any chemicals known to the State of California to cause cancer.

#### CANADA

**WHMIS CLASS:** Class A - Aerosol

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**DOMESTIC SUBSTANCE LIST (INVENTORY):** All components of this product are listed on the Canadian DSL.

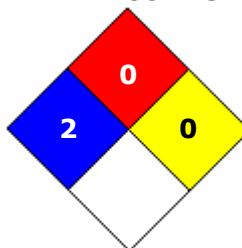
### 16. OTHER INFORMATION

**APPROVED BY:** Pierce A. Pillon    **TITLE:** Chemist

#### HMIS RATING

<b>HEALTH</b>	<input type="checkbox"/>	<b>2</b>
<b>FLAMMABILITY</b>	<input type="checkbox"/>	<b>0</b>
<b>PHYSICAL HAZARD</b>	<input type="checkbox"/>	<b>0</b>
<b>PERSONAL PROTECTION</b>	<input type="checkbox"/>	

#### NFPA CODES



**DATA SOURCES:** Code of Federal Regulations (CFR) The Sigma-Aldrich Library of Regulatory and Safety Data  
OSHA Hazard Communication Standard (29CFR1910.1200) Various Federal, State and Local Regulations

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