



# Material Safety Data Sheet

## FC13-698E

1,3-(1,1,2,2-Tetrafluoroethoxy)propane

Revised 26-October-2011

### 1. PRODUCT AND COMPANY IDENTIFICATION

#### Material Identification

**Product name:** FC13-698E  
**Chemical name:** 1,3-(1,1,2,2-Tetrafluoroethoxy)propane  
**Synonym:** HFE-698E

#### Company Identification

**Distributor:** **Fluoryx, Inc.**  
1933 Davis St., Suite 293  
San Leandro, CA 94577  
USA

**Emergency call:** +86-1346-4812437  
+1-510-329-2811

### 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture:** Irritating to eyes, respiratory system and skin.

#### Label elements

Pictogram



Signal word

Irritant

Hazard statement(s)

H316: Causes mild skin irritation

H320: Causes eye irritation

H335: May cause respiratory irritation

Precautionary statement(s)

P262: Do not get in eyes, on skin, or on clothing

Hazard symbol(s)

Xi, irritant

R-phrase(s)

R36: Irritating to eyes

R37: Irritating to respiratory system

R38: Irritating to skin

Other hazard(s)

None

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**3. COMPOSITION AND INFORMATION ON COMPONENTS**

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**Chemical formula:** HCF<sub>2</sub>CF<sub>2</sub>OCH<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OCF<sub>2</sub>CF<sub>2</sub>H  
C<sub>7</sub>H<sub>8</sub>F<sub>8</sub>O<sub>2</sub>

**Molecular weight:** 276.12

Material	CAS #	EINECS #	Classification
1,3-(1,1,2,2-Tetrafluoroethoxy)propane	138845-14-4	None	Irritant, H316, H320, H335, P262, Xi, R36, R37, R38

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**4. FIRST AID MEASURES**

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**Inhalation:** Remove to fresh air. If breathing is difficult give oxygen and seek medical attention.

**Eye Contact:** Flush with copious amounts of water for at least 15 minutes. If irritation persists, seek medical attention.

**Skin Contact:** Remove contaminated clothing. Wash affected area with soap and water. Rinse thoroughly. If irritation persists or other symptoms are observed, seek medical advice.

**Ingestion:** Rinse out mouth and drink lots of water. In case of irritation or other symptoms, seek medical attention.

**If the Subject is Completely Conscious:** Rinse mouth and administer fresh water.

**If the Subject is Unconscious:** Not applicable.

**Medical Treatment/Notes to Physician:** None.

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**5. FIRE FIGHTING MEASURES**

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**Flash Point:** 69 °C (closed cup)

**Extinguishing Methods:** Use fire-fighting measures, which suit the environment and take into account other materials that may be involved. In general, water-based extinguishers should not be used for fires involving organic materials. Use carbon dioxide or dry powder.

**Protective Equipment:** Wear self-contained breathing apparatus and protective clothing.

**Hazardous Products of Combustions:** May include carbon monoxide, carbon dioxide, hydrogen fluoride (hydrofluoric acid).

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**6. ACCIDENTAL RELEASE MEASURES**

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**Personal Precautions:** Wear protective equipment including rubber

gloves, and eye protection. Keep unprotected persons away.

**Environmental Precautions:**

Take precautions to ensure product does not contaminate the ground or enter the drainage system.

**Waste Collections:**

Mix with vermiculite or proprietary absorbent material and transfer to sealed containers for disposal.

**7. HANDLING AND STORAGE**

**Handling Requirements:**

Chemicals should be used only by those trained in handling potentially hazardous materials. Rubber gloves, eye protection and protective clothing should be worn. Operations should be carried out in an efficient fume hood or equivalent system.

**Storage Conditions:**

Store in tightly sealed containers in a cool place. Protect from moisture.

**Packaging:**

Sealed HDPE-lined steel drum.

**8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**

**Occupational Exposure Controls:**

**Respiratory:**

Avoid inhalation of product. Handle in an efficient fume hood or equivalent system.

**Hand and body protection:**

Irritant product. Avoid skin contact. Wear rubber gloves, protective clothing and, for larger quantities, full arm, body and face protection. Wash hands thoroughly after handling.

**Eye protection:**

Avoid eye contact. Wear safety spectacles, goggles or, for larger quantities, a full face mask.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance</b>	Liquid
<b>Color</b>	Clear, colorless
<b>Boiling Point</b>	162 °C @ 760 mm Hg
<b>Flash Point</b>	69 °C (closed cup)
<b>Ozone Depletion Potential</b>	Not determined
<b>Global Warming Potential</b>	Not determined
<b>Specific Gravity (H<sub>2</sub>O = 1):</b>	1.4273 g/mL @ 25.8 °C
<b>Refractive Index</b>	1.3090 @ 25 °C
<b>Viscosity (mpa*s)</b>	Not determined
<b>Ames Test</b>	Not determined
<b>Oxidizer</b>	Non-oxidizing (by EC criteria)

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**10. STABILITY AND REACTIVITY**

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**Materials and Substances to Avoid:** Strong bases. Strong oxidizing agents.  
**Hazardous Decomposition Products:** May include: carbon monoxide, carbon dioxide, hydrogen fluoride (hydrofluoric acid).

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**11. TOXICOLOGICAL INFORMATION**

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**RTECS No.** Not determined.  
**Acute Toxicity:** LD<sub>50</sub>: Not available.  
Irritating to eyes, respiratory system and skin.

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**12. ECOLOGICAL INFORMATION**

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**General:** Take care to prevent chemicals from entering the ground, water courses or drainage systems.

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**13. DISPOSAL CONSIDERATIONS**

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**Waste Treatment:**  
**Packaging Treatment:**  
**Operation Treatment:** Disposal should be via an approved contractor and should take full account of local regulations.

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**14. TRANSPORT INFORMATION**

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**Shipping Information:** Not regulated as a hazardous material by DOT, IMO, or IATA.  
**DOT Proper Shipping Name:** None. Non-hazardous for transport.  
**UN Number:** None. Non-hazardous for transport.  
**IATA:** Non-hazardous for air transport.

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**15. REGULATORY INFORMATION**

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**TSCA Listed:** No  
**Hazard Symbols:** Irritant (Xi).



**Note:** The regulatory information given above only indicates the principal regulations specifically applicable to the product described in the safety data sheet. The user's attention is drawn to the possible existence of additional provisions which complete these regulations. Refer to all

applicable national, international and local regulations or provisions.

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**16. OTHER INFORMATION**

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**Legal Disclaimer:**

For R&D use only. Not for drug, household, or other uses. The previous information is based upon our current knowledge and experience of our product and is not exhaustive. It applies to the product as defined by the specifications. In case of combinations or mixtures, one must confirm that no new hazards are likely to exist. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and integrity of the work environment. Unless noted to the contrary, the technical information applies only to pure product.

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End of MSDS