



Material Safety Data Sheet

FC13-3400

1,1,2,2-Tetrafluoroethyl 2,2,2-Trifluoroethyl Ether

Revised 12-August-2009

1. PRODUCT AND COMPANY IDENTIFICATION

Material Identification

Product name: FC13-3400
Chemical name: 1,1,2,2-Tetrafluoroethyl 2,2,2-trifluoroethyl ether
Chemical formula: $\text{CF}_3\text{CH}_2\text{OCF}_2\text{CF}_2\text{H}$
 $\text{C}_4\text{H}_3\text{F}_7\text{O}$
Synonym: HFE-347E

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. COMPOSITION AND INFORMATION ON COMPONENTS

Material	Molecular Weight	Weight Percent	CAS Number
1,1,2,2-Tetrafluoroethyl-2,2,2-trifluoroethyl ether	200.06	> 99 %	406-78-0

3. HAZARDS IDENTIFICATION

Emergency Overview:

Route of Entry

Inhalation: Yes
Eye contact: Yes
Skin contact: Yes
Ingestion: Yes

Potential Effects of Exposure:

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness. The eyes may water profusely.

Ingestion: There may be soreness and redness of the mouth and throat.

Inhalation: There may be irritation of the throat with a feeling of tightness in the chest. Exposure may cause coughing or wheezing.

4. FIRST AID MEASURES

Skin Contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash immediately with plenty of soap and water.

Eye Contact: Wash the eye with running water for 15 minutes. Seek medical attention.

Ingestion: Rinse the mouth with water. Seek medical attention.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor.

5. FIRE FIGHTING MEASURES

Extinguishing Media: Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

Exposure Hazards: In combustion, emits toxic fumes.

Protection of Fire-Fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Refer to section 8 of SDS for personal protection details. Do not approach from downwind of release. If outside, keep bystanders upwind and away from danger point. Mark the contaminated area with signs and prevent access for unauthorized personnel. Turn leaking containers leak-side up to prevent the escape of liquid.

Environmental Precautions: Do not discharge into drains or rivers. Contain the spillage.

Clean-Up Procedures: Absorb into dry earth or sand. Transfer to a closable, labeled salvage container for disposal by an appropriate method.

7. HANDLING AND STORAGE

Handling Requirements:

Avoid direct contact with the substance. Ensure there is sufficient ventilation of the area. Do not handle in a confined space. Avoid the formation or spread of mists in the air. Use only in fume hood

Storage Conditions:

Store in cool, well-ventilated area. Keep container tightly closed.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**Engineering Measures:**

Ensure there is sufficient ventilation of the area.

Respiratory Protection:

Self-contained breathing apparatus must be available in case of emergency.

Hand Protection:

Protective gloves.

Eye Protection:

Safety glasses. Ensure eye bath is at hand.

Skin Protection:

Protective clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Boiling Point	56.2 °C
Form	Clear liquid
Color	None
Melting Point	-91 °C
Flash Point	None
Density	1.487 g/mL @ 25 °C
Refractive Index	1.2760 @ 20 °C
Ozone Depletion Potential	0
Global Warming Potential	540 (CO ₂ = 1; 100 yrs)
Molecular Weight	200.06

10. STABILITY AND REACTIVITY**Stability:**

Stable under normal conditions.

Conditions to Avoid:

Heat.

Materials to Avoid:

Strong oxidizing agents. Strong acids.

Hazardous Decomposition Products:

In combustion, emits toxic fumes.

11. TOXICOLOGICAL INFORMATION**Chronic Toxicity:**

May be harmful by inhalation, ingestion, or skin absorption.

Routes of Exposure:
exposure

Refer to section 4 of MSDS for routes of

Corresponding Symptoms:

May be harmful if swallowed, inhaled, or absorbed through skin.

12. ECOLOGICAL INFORMATION

Mobility:	Data not yet known.
Persistence and Degradability:	No data available.
Bioaccumulative Potential:	No data available.
Other Adverse Effects:	No data available.

13. DISPOSAL CONSIDERATIONS

Disposal Operations:	Material should be disposed of in accordance with local, state and federal regulations.
Disposal of Packaging:	Dispose of as special waste in compliance with local and national regulations. Observe all federal, state and local environmental regulations.
NB:	The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

14. TRANSPORT INFORMATION

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.

15. REGULATORY INFORMATION

Hazard Symbols: Irritant (Xi).

**Risk Phrases:**

R36/37/38: Irritating to eyes, respiratory system and skin.

Safety Phrases:

S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.

S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

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.

15. OTHER INFORMATION

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