

FC13-3400

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

Revised 11-November-2016

1. PRODUCT AND COMPANY IDENTIFICATION

Material Identification

Catalog number: FC13-3400
Chemical name: 1,1,2,2-Tetrafluoroethyl 2,2,2-trifluoroethyl ether
Synonym: HFE-347E

Company Identification

Distributor: **Fluoryx Labs**
 3650 Research Way, #22
 Carson City, NV 89706
 USA
Emergency call: +01-813-248-0585 (International)
 +1-800-255-3924 (USA)

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
 P262: Do not get in eyes, on skin, or on clothing
 Xi, irritant
 R36: Irritating to eyes
 R37: Irritating to respiratory system
 R38: Irritating to skin

Precautionary statement(s)

Hazard symbol(s)

R-phrases)

Other hazard(s)

None

Recommended Exposure Limits

Recommended acceptable exposure limit is 50

ppm (8-hr TWA). EPA recommends a ceiling limit (maximum concentration) of 150 ppm

3. COMPOSITION AND INFORMATION ON COMPONENTS

Chemical Formula	CF ₃ CH ₂ OCF ₂ CF ₂ H C ₄ H ₃ F ₇ O
Molecular Weight	200.06

Material	CAS Number	EINECS #	TSCA
1,1,2,2-Tetrafluoroethyl-2,2,2-trifluoroethyl ether	406-78-0	None	Listed

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

Recommended Exposure Limits	Recommended acceptable exposure limit is 50 ppm (8-hr TWA). EPA recommends a ceiling limit (maximum concentration) of 150 ppm.
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	1.276 @ 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:	Do not contact with open flame.
Materials to Avoid:	Strong oxidizing agents. Strong acids.
Hazardous Decomposition Products:	In combustion, emits toxic fumes of carbon monoxide, carbon dioxide, and hydrogen fluoride.

11. TOXICOLOGICAL INFORMATION

Acute Effects:	Irritant
Chronic Toxicity:	May be harmful by inhalation, ingestion, or skin

Routes of Exposure:	absorption. Refer to section 4 of MSDS for routes of exposure.
Corresponding Symptoms:	May be harmful if swallowed, inhaled, or absorbed through skin.
Acute inhalation toxicity LC50 [mortality]	Rats, nose part 4hours, >3000ppm (24.8mg/l), [2/5: male]
Acute oral toxicity LD50 [mortality]	Rats, >2000mg/kg, [0/5: male, female]
Repeated inhalation toxicity (NOEL)	Rats, whole-body 28days, 0.99mg/l
Repeated inhalation toxicity (NOAEL)	Not available
Repeated oral toxicity (NOEL)	Rats, 28days, 100mg/kg/day
Repeated oral toxicity (NOAEL)	Rats, 28days, 1000mg/kg/day
Dermal irritation	Rabbits, non irritant
Chromosomal aberration	Negative (Liq.)
Ames test	Negative (Liq.)
Biogradation (%)	BOD=2%, GC=0%
Partition coefficient	logPow=2.186
Bioconcentration factor [test concentration]	Not available

12. ECOLOGICAL INFORMATION

Mobility:	Data not 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

Adhere to all Federal, State, and local regulations.

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 SDS