

## FC13-894Bz

## 1,1,2,2-Tetrafluoroethyl Benzyl Ether

Revised 11-November-2016

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**1. PRODUCT AND COMPANY IDENTIFICATION**


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<b>Product Name</b>	1,1,2,2-Tetrafluoroethyl benzyl ether
<b>Catalog Number</b>	FC13-894Bz
<b>Supplier</b>	<b>Fluoryx Labs</b> 3650 Research Way, #22 Carson City, NV 89706 USA
<b>Emergency call:</b>	+01-813-248-0585 (International) +1-800-255-3924 (USA)

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**2. HAZARDS INFORMATION**


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**Emergency Overview**

<b>OSHA Hazards</b>	Combustible liquid
<b>GHS Classification</b>	Flammable liquid (Category 4)

**GHS Label elements, including precautionary statements**

Pictogram



Signal word

Warning

**Hazard statement(s)**

H226

H335

Flammable liquid and vapor.  
May cause drowsiness or dizziness.**Precautionary statement(s)**

P210

P260

P271

P285

Keep away from heat/sparks/open flames/hot surfaces – No smoking.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Use only outdoors or in a well-ventilated area.  
In case of inadequate ventilation wear respiratory protection.**Potential Health Effects****Inhalation**

No reported cases of intoxication in humans. Risk of moderate consequences experimentally observed or under certain conditions. May cause respiratory tract irritation.

**Skin**  
**Eyes**  
**Ingestion**

May cause skin irritation.  
May cause eye irritation.  
May be harmful if swallowed.

### 3. COMPOSITION AND INFORMATION ON INGREDIENTS

**Synonyms** HFE-894Bz;  
Benzyl 1,1,2,2-tetrafluoroethyl ether;  
[(1,1,2,2-Tetrafluoroethoxy)methyl]benzene

**Chemical formula** C<sub>8</sub>H<sub>8</sub>F<sub>4</sub>O  
C<sub>6</sub>H<sub>5</sub>OCF<sub>2</sub>CF<sub>2</sub>H

#### Components

Material	Molecular Weight	CAS #	EINECS #	TSCA
1,1,2,2-Tetrafluoroethyl benzyl ether r	208.13	115611-57-9	None	Not listed

### 4. FIRST AID MEASURES

**General advice** Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact** Wash off with soap and plenty of water.

**In case of eye contact** Flush eyes with water as a precaution.

**If swallowed** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 5. FIREFIGHTING MEASURES

**Conditions of flammability** Keep away from heat/sparks/open flame/hot surface. No smoking.

**Suitable extinguishing media** Carbon dioxide, dry chemical powder, alcohol or polymer foam, Halons.

**Special protective equipment for firefighters** Wear self-contained breathing apparatus for fire fighting.

**Hazardous combustion products** Hazardous decomposition products formed under fire conditions - carbon oxides, hydrogen fluoride, carbonyl fluoride.

### 6. ACCIDENTAL RELEASE MEASURES

**Personal precautions** Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods for cleaning up** Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations.

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**7. HANDLING AND STORAGE**

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**Precautions for Safe Handling**

Avoid contact with the substance. Provide appropriate exhaust ventilation at places where dust, mist or vapors are formed. Do not handle in a confined space.

**Conditions for Safe Storage**

Store in dry and cool place. Keep away from heat, sparks and flames. Containers that are opened must be carefully resealed and kept upright to prevent leakage.

**Other Precautions:**

None known.

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**8. EXPOSURE CONTROLS AND PERSONAL PROTECTION**

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Contains no substances with published occupational exposure limit values. However, inhalation exposure should be strictly limited.

**Personal protective equipment**

**Respiratory protection**

Use only in a chemical fume hood or local exhaust ventilation, and process enclosure if necessary to control exposure. Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type AXBEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Eye protection**

Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection**

Impervious clothing. Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene measures**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of the workday.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

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**Appearance**

Form

Liquid, clear

Color

Colorless

**Safety Data**

pH

No data available

Melting Point/Freezing Point	No data available
Boiling Point	176 °C @ 760 mm Hg
Flash Point	71 °C, closed cup
Ignition Temperature	No data available
Auto-ignition Temperature	No data available
Lower Explosion Limit	No data available
Upper Explosion Limit	No data available
Thermal Decomposition Temperature	No data available
Vapor Pressure	No data available
Density	1.27 g/mL @ 25 °C
Water Solubility	Negligible
Partition Coefficient ( <i>n</i> -octanol/water)	No data available
Relative Vapor Density (Air = 1)	> 1
Odor	Ethereal
Odor Threshold	No data available
Evaporation Rate	No data available
Refractive index	1.43 @ 25 °C

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## 10. STABILITY AND REACTIVITY

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<b>Storage stability</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions</b>	None known.
<b>Conditions to avoid</b>	Heat, flames and sparks. Extremes of temperature and direct sunlight.
<b>Materials to avoid</b>	Oxidizing agents. Strong acids. Strong bases.
<b>Hazardous decomposition products</b>	Hazardous decomposition products formed under fire conditions - carbon oxides, hydrogen fluoride, carbonyl fluoride.

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## 11. TOXICOLOGICAL INFORMATION

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<b>Exposure limits</b>	None established
<b>Acute toxicity</b>	Oral: no data available Inhalation: no data available Dermal: no data available
<b>Chronic toxicity</b>	No data available.
<b>Skin corrosion/irritation</b>	No data available.
<b>Serious eye damage/eye irritation</b>	No data available.
<b>Respiratory or skin sensitization</b>	No data available.
<b>Germ cell mutagenicity</b>	No data available.
<b>Carcinogenicity</b>	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.  NTP: 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.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity** No data available

**Tetragenicity** No data available

**Specific target organ toxicity (Globally Harmonized System)**

**Single exposure** No data available

**Repeated exposure** No data available

**Aspiration Hazard** No data available

**Potential Health Effects**

**Inhalation** May cause respiratory tract irritation. May cause dizziness.

**Skin** May cause skin irritation.

**Eyes** May cause eyes irritation.

**Ingestion** May be harmful if swallowed.

**Signs and Symptoms of Exposure** No data available

**Synergistic Effects** No data available

**Additional Information** No data available

**12. ECOLOGICAL INFORMATION**

**Toxicity** No data available

**Persistence and Degradability** No data available

**Bioaccumulative Potential** No data available

**Mobility in Soil** No data available

**PBT and vPvB Assessment** No data available

**Air, Photolysis,** ODP = 0. Result: no effect on stratospheric ozone. Reference value for CFC 11: ODP = 1.

**Air, Greenhouse Effect** GWP = No data available. Reference value for carbon dioxide: GWP = 1.

**Other adverse effects** No data available

**13. DISPOSAL CONSIDERATIONS**

**Product** Burn in a chemical incinerator equipped with an afterburner and scrubber. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Contact Fluoryx to return unused product.

**Contaminated packaging** Dispose of as unused product.

**14. TRANSPORTATION INFORMATION**

**DOT (US)** NA1993  
Class CBL  
Proper shipping name: Combustible Liquid, n.o.s.  
(1,1,2,2-Tetrafluoroethyl benzyl ether)  
Packing group III

Marine pollutant: No  
 Poison inhalation hazard: No  
 Labeling: None

**IMDG**

Not dangerous goods

**IATA**

Not dangerous goods

**15. REGULATORY INFORMATION**

**OSHA Hazards**

Combustible liquid.

**TSCA Status**

Not listed on US TSCA Inventory. It is for research and development use only.

**DSL Status**

The substance is not specified on any list.

**SARA 302 Components**

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components**

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

**SARA 311/312 Hazards**

Fire hazard.

**Massachusetts Right To Know Components**

No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components**

No components are subject to the Pennsylvania Right to Know Act.

**New Jersey Right To Know Components**

No components are subject to the New Jersey Right to Know Act.

**California Prop. 65 Components**

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

**16. OTHER INFORMATION**

**HMIS Classification**

Health Hazard: 1  
 Flammability: 2  
 Physical hazards: 0

**NFPA Rating**

Health Hazard: 1  
 Fire: 2  
 Reactivity Hazard: 0

**Legal Disclaimer:**

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