

Material Safety Data Sheet

HFE-374

24030

Ethyl-1,1,2,2-Tetrafluoroethyl Ether

Revised March 09,2013

1. PRODUCT AND COMPANY IDENTIFICATION

• Material Identification

Product name: HFE-374
Chemical name: Ethyl-1,1,2,2-tetrafluoroethyl ether
Chemical formula: $\text{HCF}_2\text{CF}_2\text{OCH}_2\text{CH}_3$
 $\text{C}_4\text{H}_6\text{F}_4\text{O}$

• Company Identification

Distributor: Fuxin Hengtong Fluorine Chemicals Co., Ltd
Emergency call: +86-418-2558700

2. COMPOSITION AND INFORMATION ON COMPONENTS

Material	Molecular Weight	Weight Percent	CAS Number
Ethyl 1,1,2,2-tetrafluoroethyl ether	146.09	>99%	512-51-6

3. HAZARDS IDENTIFICATION

Emergency Overview: Flammable. Irritating to eyes, respiratory system and skin.

4. FIRST AID MEASURES

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.

5. FIRE FIGHTING MEASURES

Flash Point:	-15 °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).

6. ACCIDENTAL RELEASE MEASURES

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.

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

Appearance	Liquid
Color	None
Boiling Point	56.6 °C @ 760 mm Hg
Melting Point	-86C
Flash Point	-15 °C
Ozone Depletion Potential	0
Global Warming Potential	47 (CO ₂ = 1; 100 yrs)
Specific Gravity (H₂O = 1):	1.202 g/ml @ 25 °C
Viscosity (mpa*s)	0.496 cp at 23 °C

Ames Test	Negative
Density	1.198 @ 25 °C
Oxidizer	Non-oxidizing (by EC criteria)

10. STABILITY AND REACTIVITY

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

11. TOXICOLOGICAL INFORMATION

RTECS No.	Not listed.
Acute Toxicity:	LD ₅₀ : Not available. Irritating to eyes, respiratory system and skin.

12. ECOLOGICAL INFORMATION

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

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

14. TRANSPORT INFORMATION

Mode	DOT/IMDG/IATA
UN Number	1993
Class (Subsidiary)	3
Proper Shipping Name	Flammable Liquid, N.O.S. (Ethers)
Hazard Label (Subsidiary)	Flammable Liquid
Packing Group	II
Shipping Hazard Label:	



15. REGULATORY INFORMATION

Hazard Symbols:	Flammable (flame) Irritant.
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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.

16. 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