


[1,1,2,2-Tetrafluoro-3-\(1,1,2,2-tetrafluoroethoxy\)propane](#) [Pricing >](#)

## Product Information

<b>Chemical Formula:</b>	C <sub>5</sub> H <sub>4</sub> F <sub>8</sub> O
<b>Molecular Weight:</b>	232.07
<b>Synonyms:</b>	1,1,2,2-Tetrafluoroethyl-2,2,3,3-tetrafluoropropylether; 1,1,2,2-Tetrafluoroethyl-2,2,3,3-tetrafluoropropyl ether; Propane, 1,1,2,2-tetrafluoro-3-(1,1,2,2-tetrafluoroethoxy)-
<b>MDL No.:</b>	MFCD00155961
<b>EINECS / EC No.:</b>	605-433-4
<b>Pubchem CID:</b>	2776662
<b>IUPAC Name:</b>	N/A
<b>Standard InChI:</b>	InChI=1S/C5H4F8O/c6-2(7)4(10,11)1-14-5(12,13)3(8)9/h2-3H,1H2
<b>InChI Key:</b>	HCBRSIIGBDDCD-UHFFFAOYSA-N
<b>SMILES:</b>	C(C(C(F)F)(F)F)OC(C(F)F)(F)F
<b>Appearance:</b>	Clear, colorless liquid
<b>Melting Point:</b>	N/A
<b>Boiling Point:</b>	93.2 °C
<b>Density (Theoretical):</b>	1.5323 g/mL (20 °C)

## Safety Information

<b>Signal Word:</b>	Danger
<b>Hazard Statements:</b>	H226-H315-H319-H335
<b>Precautionary Statements:</b>	P210-P280-P301 + P330 + P331-P302 + P352-P304 + P340-P305 + P351 + P338
<b>Flash Point:</b>	27.5 °C
<b>RTECS:</b>	N/A
<b>HTN:</b>	2909.19.1800
<b>Transportation Information:</b>	UN3271 - HC 3 - PG III
<b>GHS Pictograms:</b>	

# SAFETY DATA SHEET

Date Accessed: 05/15/2024

Date Revised: 01/15/2022

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## SECTION 1. IDENTIFICATION

**Product Identifiers:** All applicable American Elements product codes for CAS #16627-68-2

**Relevant identified uses of the substance:**  
Scientific research and development

Supplier details:  
American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351

Emergency telephone number:  
Domestic, North America +1 800-424-9300  
International +1 703-527-3887

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## SECTION 2. HAZARDS IDENTIFICATION

GHS Classification  
Flammable liquids (Category 3)  
Skin corrosion/irritation (Category 2)  
Serious eye damage/eye irritation (Category 2A)  
Respiratory tract irritation (Category 3)  
GHS Label elements, including precautionary statements  
Pictograms



Signal Word Warning  
Hazard Statement(s)  
H226 Flammable liquid and vapour  
H315 Causes skin irritation  
H319 Causes serious eye irritation  
H335 May cause respiratory irritation  
Precautionary Statement(s)  
P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking.  
P280 Wear protective gloves/protective clothing/eye protection/face

protection.

P301 + P330 + P331 IF SWALLOWED: Rinse mouth.

Do NOT induce vomiting.

P302 + P352 IF ON SKIN: wash with plenty of soap and water.

P304 + P340 IF INHALED: Remove victim to fresh air and Keep at rest in a position comfortable for breathing.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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### **SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Synonyms :

1,1,2,2Tetrafluoro3(1,1,2,2tetrafluoroethoxy)propane,  
2,2,3,3Tetrafluoro1(1,1,2,2tetrafluoroethoxy)  
propane

Formula : C<sub>5</sub>H<sub>4</sub>F<sub>8</sub>O

Molecular Weight : 232.07 g/mol

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### **SECTION 4. FIRST AID MEASURES**

In case of eye contact

Immediately flush eyes with running water for at least 15 minutes while keeping eyes open. Seek medical attention.

In case of skin contact

Wash thoroughly with soap and plenty of water. Seek medical attention.

If inhaled

Remove victim from source of exposure to fresh air. If breathing is difficult, administer oxygen. Seek medical attention.

If swallowed

Do not induce vomiting. Give water to victim to drink. Seek medical attention.

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### **SECTION 5. FIREFIGHTING MEASURES**

Suitable extinguishing media

Use carbon dioxide, dry chemical powder, alcoholresistant or polymer foam.

Special protective equipment for firefighters

Wear selfcontained

breathing apparatus and protective clothing to prevent contact with skin and eyes.

Unusual fire and explosion hazards/decomposition of product  
emits toxic fumes under fire conditions.

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## **SECTION 6. ACCIDENTAL RELEASE MEASURES**

Personal precautions

Use personal protective equipment. Avoid breathing fumes, vapors, mists or gas. Ventilate area.

Remove all sources of ignition. Evacuate personnel.

Environmental precautions

Prevent further leakage if safe to do so.

Methods and materials for containment and clean up

Absorb spills on sand or vermiculite and place in closed container for disposal.

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## **SECTION 7. HANDLING AND STORAGE**

Precautions for safe handling

Avoid prolonged use. Avoid all direct contact with material. Do not breathe dust or vapor. Wash thoroughly after handling.

Precautions for safe storage

Keep container tightly closed. Store in a cool, dry, wellventilated area.

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## **SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Contains no substances with occupational exposure limit values.

Personal protective equipment

Eye/face protection

Wear protective safety goggles or face shields tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

Hand/skin protection

Avoid all direct contact with product.

Wear chemicalresistant gloves.

Wear protective clothing and boots.

After contact with skin, wash immediately.

Respiratory protection

Ensure adequate ventilation during use. Approved respiratory equipment must be used when airborne concentrations are unknown or exceed the exposure limits.

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## **SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance clear colorless liquid  
Odour no data available  
Odour Threshold no data available  
Melting point/Freezing Point 94°C  
Boiling Point 92°C  
Flash Point 27°C-closed  
cup  
Evaporation Rate no data available  
Flammability (solid, gas) no data available  
Upper/Lower Flammability or Explosive limits no data available  
Vapour pressure no data available  
Relative Density 1.533  
Solubility(ies) no data available  
Partition coefficient: noctanol/  
water no data available  
Autoignition  
temperature no data available  
Decomposition temperature no data available  
Viscosity no data available  
Refractive Index no data available

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## **SECTION 10. STABILITY AND REACTIVITY**

Chemical stability  
Stable under recommended storage conditions.  
Possibility of hazardous reactions  
no data available  
Conditions to avoid  
no data available  
Incompatible materials  
Strong oxidizing agents, strong acids, and metals.  
Hazardous decomposition products  
May evolve carbon monoxide, carbon dioxide, and  
hydrogen fluoride.

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## **SECTION 11. TOXICOLOGICAL INFORMATION**

Acute toxicity  
no data available  
Skin corrosion/irritation  
Causes skin irritation  
Serious eye damage/eye irritation  
Causes serious eye irritation  
Respiratory or skin sensitization  
no data available

Germ cell mutagenicity  
no data available  
Carcinogenicity  
no data available  
Reproductive toxicity  
no data available  
STOTsingle  
exposure  
May cause respiratory irritation  
STOTrepeated  
exposure  
no data available  
Aspiration hazard  
no data available  
Exposure Routes  
Irritating to skin, eyes, and respiratory system.  
May have harmful effects if inhaled or swallowed.  
To the best of our knowledge, the health hazards of  
this material have not been fully investigated.

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## **SECTION 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  
Other adverse effects  
no data available

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## **SECTION 13. DISPOSAL CONSIDERATIONS**

DISPOSAL CONSIDERATIONS  
Dissolve in or mix the material with a combustible  
solvent and burn in a chemical incinerator equipped  
with an afterburner and scrubber. Observe all Federal,  
State and local laws.

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## **SECTION 14. TRANSPORT INFORMATION**

DOT  
Ethers, n.o.s.  
3  
UN3271 III

IMDG  
Ethers, n.o.s.  
3  
UN3271 III  
EMSNo:  
FE,  
SD  
Marine Pollutant: No  
IATA  
Ethers, n.o.s.  
3  
UN3271 III

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## **SECTION 15. REGULATORY INFORMATION**

### **SARA 302 Components**

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

### **SARA 313 Components**

SARA 313: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 313.

### **New Jersey Right to Know Components**

This product may contain a chemical on the New Jersey Right to Know Components List.

### **California Prop. 65 Components**

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

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## **16. OTHER INFORMATION**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.

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