

## FC18-04

### 2-(Perfluorobutyl)ethyl Thiol

Revised 15-December-2021

#### 1. PRODUCT AND COMPANY IDENTIFICATION

##### Product Identifier

Product name	2-(Perfluorobutyl)ethyl thiol
Catalog number	FC18-04
Brand	Fluoryx Labs
CAS number	34451-25-7

##### Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Identified uses	Laboratory chemicals. Synthesis of substances.
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##### Details of the Supplier of the Safety Data Sheet

Company	Fluoryx Labs 3650 Research Way, #22 Carson City, NV 89706 USA +1 (510) 329-9149 www.fluoryx.com
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##### Emergency Call (ChemTel)

+01-813-248-0585 (International)
+1-800-255-3924 (USA)

#### 2. HAZARDS IDENTIFICATION

##### Classification of the Substance or Mixture

**GHS classification in accordance with 29 CFR 1910 (OSHA HCS)**

Eye irritation (Category 2A), H319

##### GHS Label Elements, Including Precautionary Statements

Pictogram

GHS07: Exclamation mark



Signal Word

Warning; Stench

Hazard statements

H319

Causes serious eye irritation

Precautionary phrases

P264

P271

P280

Wash skin thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Wear protective gloves/protective clothing/eye protection/face protection.

P305 + P351 + P338

IF IN EYES: Rinse cautiously with water for several

minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### 3. COMPOSITION AND INFORMATION ON COMPONENTS

<b>Synonyms</b>	1 <i>H</i> ,1 <i>H</i> ,2 <i>H</i> ,2 <i>H</i> -Perfluorohexanethiol; 3,3,4,4,5,5,6,6,6-Nonafluoro-1-hexanethiol; 1 <i>H</i> ,1 <i>H</i> ,2 <i>H</i> ,2 <i>H</i> -Perfluoro-1-hexanethiol; 1 <i>H</i> ,1 <i>H</i> ,2 <i>H</i> ,2 <i>H</i> -Perfluorohexyl mercaptan
<b>Formula</b>	C <sub>6</sub> H <sub>5</sub> F <sub>9</sub> S CF <sub>3</sub> CF <sub>2</sub> CF <sub>2</sub> CF <sub>2</sub> CH <sub>2</sub> CH <sub>2</sub> SH
<b>Molecular Weight</b>	280.15 g/mol
<b>CAS Number</b>	34451-25-7
<b>EC Number</b>	None

#### Hazardous Components

Component	Classification	Concentration
2-(Perfluorohexyl)ethyl thiol	Eye Irrit. 2A; H319	≤100%

For the full text of the H-Statements mentioned in this Section, see Section 16.

### 4. FIRST AID MEASURES

#### Description of First Aid Measures

<b>General advice</b>	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
<b>If inhaled</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, give artificial respiration. Consult a physician.
<b>In case of skin contact</b>	Wash off with soap and plenty of water. Consult a physician.
<b>In case of eye contact</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for 15 minutes. Consult a doctor.
<b>If swallowed</b>	Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

#### Most Important Symptoms and Effects, Both Acute and Delayed

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

#### Indications of Any Immediate Medical Attention

No data available.

### 5. FIRE-FIGHTING MEASURES

<b>Suitable Extinguishing Media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide
<b>Special Hazards Arising from the Substance</b>	Hazardous decomposition products formed under fire conditions - carbon oxides, hydrogen fluoride, sulfur oxides
<b>Special Protective Equipment for Firefighters</b>	Wear self contained breathing apparatus for fire fighting.

### 6. ACCIDENTAL RELEASE MEASURES

<b>Personal Precautions</b>	Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
<b>Environmental Precautions</b>	Do not let product enter drains.
<b>Methods for Cleaning Up</b>	Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

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## 7. HANDLING AND STORAGE

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<b>Precautions for Safe Handling</b>	Avoid contact with skin and eyes. Avoid inhalation of vapor or mist. Normal measures for preventive fire protection. For precautions see section 2.2.
<b>Conditions for Safe Storage, Including any Incompatibilities</b>	Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.  Handle and store under inert gas. Air sensitive.
<b>Specific end use(s)</b>	Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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<b>Components with Workplace Control Parameters</b>	Contains no substances with occupational exposure limit values.
<b>Appropriate Engineering Controls</b>	Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.
<b>Personal Protective Equipment</b>	
<b>Eye/face protection</b>	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).
<b>Skin protection</b>	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.
<b>Body protection</b>	Impervious clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
<b>Respiratory protection</b>	Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (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).
<b>Control of environmental exposure</b>	Do not let product enter drains.

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**9. PHYSICAL AND CHEMICAL PROPERTIES**


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**Appearance**

Form	Clear liquid
Color	Colorless

**Safety Data**

pH	No data available
Melting point/freezing point	No data available
Boiling point	124 °C @ 760 mm Hg
Flash point	> 105 °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	No data available
Water solubility	Insoluble
Partition coefficient ( <i>n</i> -octanol/water)	No data available
Relative vapor density (air = 1)	> 1
Odor	Stench; strong mercaptan/thiol odor
Odor threshold	Very low
Evaporation rate	No data available
Oxidizing properties	No data available

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**10. STABILITY AND REACTIVITY**


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<b>Reactivity</b>	Slowly oxidizes in the presence of oxygen to produce disulfides.
<b>Chemical Stability</b>	Stable in sealed containers under dry, inert atmosphere.
<b>Possibility of Hazardous Reactions:</b>	No data available. Store under inert (dry) atmosphere.
<b>Conditions to Avoid</b>	Exposure to oxygen.
<b>Incompatible Materials</b>	Avoid strong oxidizing agents.
<b>Hazardous Decomposition Products</b>	In combustion, emits toxic fumes including carbon oxides, sulfur oxides, and hydrogen fluoride.

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**11. TOXICOLOGICAL INFORMATION**


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**Acute Toxicity**

Oral LD50	No data available
Inhalation LC50	No data available
Dermal LD50	No data available
Other information on acute toxicity	No data available

**Skin Corrosion/Irritation**

Not corrosive

**Serious Eye Damage/Eye Irritation**

No data available.

**Respiratory or Skin Sensitization**

No data available

**Germ Cell Mutagenicity**

No data available

**Carcinogenicity**

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

**Teratogenicity**

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

**Synergistic Effects**

No data available

**Additional Information**

RTECS: Not available

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**12. ECOLOGICAL INFORMATION**

**Toxicity**

No data available

**Persistence and Degradability**

Assumed to not readily degrade

**Bioaccumulative Potential**

No data available

**Mobility in Soil**

No data available

**PBT and vPvB Assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**Other Adverse Effects**

No data available

**13. DISPOSAL CONSIDERATIONS**

**Product**

Offer non-recyclable solutions to a licensed disposal company. Contact Fluoryx to return unused product.

**Contaminated Packaging**

Dispose of as unused product.

**14. TRANSPORT INFORMATION**

**DOT (US)**

Not dangerous goods

**IMDG**

Not dangerous goods

**IATA**

UN-number

UN 3334

Class

9

Packing group

III

Proper shipping Name

Aviation regulated liquid, n.o.s. (1-Hexanethiol,

3,3,4,4,5,5,6,6-, nonafluoro-)

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**15. REGULATORY INFORMATION**

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<b>TSCA Inventory</b>	Not listed.
<b>DSL Status</b>	Not on the Canadian DSL list.
<b>SARA 302 Components</b>	SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
<b>SARA 313 Components</b>	SARA 313: 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.
<b>SARA 311/312 Hazards</b>	Acute health hazard
<b>Massachusetts Right To Know Components</b>	No components are subject to the Massachusetts Right to Know Act.
<b>Pennsylvania Right To Know Components</b>	1-Hexanethiol, 3,3,4,4,5,5,6,6-, nonafluoro-CAS-No. 34451-25-7
<b>New Jersey Right To Know Components</b>	1-Hexanethiol, 3,3,4,4,5,5,6,6-, nonafluoro-CAS-No. 34451-25-7
<b>California Prop. 65 Components</b>	This product does not contain any chemicals known to State of California to cause cancer, birth, or any other reproductive defects.

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**16. OTHER INFORMATION**

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**Full text of H-Statements Referred to Under Sections 2 and 3.**

Eye Irrit. H319	Eye irritation Causes serious eye irritation.
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**HMIS Rating**

Health hazard	2
Flammability	0
Physical hazard	0

**NFPA Rating**

Health hazard	2
Fire hazard	0
Reactivity hazard	0

**Further Information**

For industrial 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