Fluoryx Labs

# Safety Data Sheet

## FC13-MTMFB

## 3-Methoxy-2-(Trifluoromethyl)FluoroButane

Revised 28-Mar-2023

### 1. PRODUCT AND COMPANY IDENTIFICATION

| | |
|---|---|
| **Product Name** | 3-Methoxy-2-(trifluoromethyl)fluorobutane |
| **Catalog Number** | FC13-MTMFB |
| **CAS Number** | 181214-73-3 |
| **Supplier** | Fluoryx Labs<br>3650 Research Way, #22<br>Carson City, NV 89706<br>USA |
| **Uses** | Heat transfer agent; cooling agent; electrical insulator; solvent; laboratory chemical |
| **Emergency call (VelocityEHS):** | +01-813-248-0585 (International)<br>+1-800-255-3924 (USA) |

### 2. HAZARDS INFORMATION

**Emergency Overview**

| | |
|---|---|
| **OSHA Hazards** | Not classified as hazardous according to Occupational Safety and Health (Chemical Classification, Labelling and Safety Data Sheets) Regulations 2013. |
| **GHS Classification** | None |
| **GHS Label elements, including precautionary statements** | |
| Pictogram | None |
| Signal word | None |
| **Hazard statement(s)** | None |
| **Precautionary statement(s)** | None |

**Hazards not otherwise classified (HNOC) or not covered by GHS**

Inhalation of decomposition products from overheating may cause lung irritation or shortness of breath.

### 3. COMPOSITION AND INFORMATION ON INGREDIENTS

| | |
|---|---|
| **Synonyms** | Butane, 1,1,1,2,3,4,4,4-octafluoro-2-methoxy-3-(trifluoromethyl)-;<br>1,1,1,2,3,4,4,4-octafluoro-2-methoxy-3-(trifluoromethyl)butane;<br>HFE-7176 |
| **Chemical formula** | $CF_3CF(OCH_3)CF(CF_3)_2$<br>$C_6H_3F_{11}O$ |

| | |
|---|---|
| **Molecular weight** | 300.07 g/mol |
| **CAS number** | 181214-73-3 |
| **EC number** | None |
| **TSCA status** | Not listed |

**Components**

| Material | Classification | Concentration |
|---|---|---|
| 3-Methoxyperfluoro(2-methylpentane) | None | ≤ 100% |

## 4. FIRST AID MEASURES

| | |
|---|---|
| **If inhaled** | No need for first aid is anticipated. |
| **In case of skin contact** | No need for first aid is anticipated. |
| **In case of eye contact** | No need for first aid is anticipated. |
| **If swallowed** | Rinse mouth. If you feel unwell, get medical attention. |

**Indication of any immediate medical attention and special treatment required -** Not applicable

## 5. FIREFIGHTING MEASURES

| | |
|---|---|
| **Suitable extinguishing media** | Material will not burn. Use a firefighting agent suitable for the surrounding fire. |
| **Special protective equipment for firefighters** | When firefighting conditions are severe and total thermal decomposition of the product is possible, wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, tunic and trousers (leggings), bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head. |
| **Hazardous combustion products** | Exposure to extreme heat can give rise to thermal decomposition. Hazardous decomposition products formed under fire conditions - carbon oxides, hydrogen fluoride. |

## 6. ACCIDENTAL RELEASE MEASURES

| | |
|---|---|
| **Personal precautions** | Evacuate area. Ventilate the area with fresh air. Observe precautions from other sections. |
| **Environmental precautions** | Do not let product enter environment. |
| **Methods for cleaning up** | Contain spill. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with an appropriate solvent selected by a qualified and authorized person. Ventilate the area with fresh air. Read and follow safety precautions on the solvent label and SDS. Seal the container. Dispose of collected material as soon as possible in |

accordance with applicable local/regional/national/international regulations.

## 7. HANDLING AND STORAGE

**Precautions for Safe Handling**

Avoid inhalation of thermal decomposition products. Avoid skin contact with hot material. For industrial/occupational use only. Not for consumer sale or use. Store work clothes separately from other clothing, food and tobacco products. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. No smoking: Smoking while using this product can result in contamination of the tobacco and/or smoke and lead to the formation of hazardous decomposition products.

**Conditions for Safe Storage**

Store in a well-ventilated place. Keep container tightly closed. Store away from heat. Store away from acids. Store away from strong bases. Store away from oxidizing agents.

## 8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

**Occupational exposure limits**

No data available.

**Engineering controls**

Provide appropriate local exhaust when product is heated. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below relevant Exposure Limits and/or control dust/fume/gas/mist/vapors/spray. If ventilation is not adequate, use respiratory protection equipment.

**Personal protective equipment**

**Respiratory protection**

During heating: Use a positive pressure supplied-air respirator if there is a potential for over exposure from an uncontrolled release, exposure levels are not known, or under any other circumstances where air-purifying respirators may not provide adequate protection.

**Skin/hand protection**

Select and use gloves and/or protective clothing approved to relevant local standards to prevent skin contact based on the results of an exposure assessment. Selection should be based on use factors such as exposure levels, concentration of the substance or mixture, frequency and duration, physical challenges such as temperature extremes, and other use conditions. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible gloves/protective clothing. Gloves made from the following material(s) are recommended: Neoprene. If this product is used in a manner that presents a higher potential for exposure (e.g., spraying, high splash potential, etc.), then use of protective coveralls may be necessary. Select and use body protection to prevent contact based on the results of an exposure assessment. The following protective clothing material(s) are recommended: Neoprene apron.

**Eye protection**

Wear safety glasses or goggles.

| | |
|---|---|
| **Thermal hazards** | Wear heat insulating gloves when handling hot material to prevent thermal burns. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| **Appearance** | |
| Form | Liquid |
| Color | Colorless, clear |
| **Safety Data** | |
| pH | Not applicable |
| Melting Point/Freezing Point | No data available |
| Boiling Point | 76 °C |
| Flash Point | None |
| Auto-ignition Temperature | No data available |
| Dielectric constant 1kHz | 7.35 |
| Dielectric strength Kv(2.54 mmgap) | 23 |
| Surface Tension | 14 mN/m |
| Thermal Decomposition Temperature | > 200 °C (anhydrous) |
| Vapor Pressure | 16 kPa @ 25 °C |
| Percent volatile | 100 % |
| Density | 1.61 g/mL |
| Water Solubility | Insoluble |
| Solubility of water in material | Slight |
| KB value | 10 |
| Relative Vapor Density (Air = 1) | > 1 |
| Odor | Faint |
| Odor Threshold | No data available |
| Evaporation Rate | No data available |
| Refractive index | 1.27 |
| Viscosity | 0.65 cSt |

## 10. STABILITY AND REACTIVITY

| | |
|---|---|
| **Storage stability** | Stable under recommended storage conditions. |
| **Possibility of hazardous reactions** | Polymerization will not occur. |
| **Conditions to avoid** | Keep away from open flames and heated surfaces above 300 °C. |
| **Materials to avoid** | Strong bases, strong acids, strong oxidizing agents. |
| **Hazardous decomposition products** | Hazardous decomposition products formed under fire conditions - carbon oxides, hydrogen fluoride, perfluoroisobutylene (PFIB). |

## 11. TOXICOLOGICAL INFORMATION

| | |
|---|---|
| **Acute Toxicity** | No data available |
| **Skin Corrosion/Irritation** | No data available**Serious Eye Damage/Irritation** No data available**Skin Sensitization** No data available**Respiratory Sensitization** No data available |
| **Germ Cell Mutagenicity** | No data available |
| **Carcinogenicity** | No data available |
| **Reproductive Toxicity** | No data available |
| **Target Organ Toxicity** | No data available |
| **Aspiration Hazard** | For the component/components, either no data are currently available or the data are not sufficient for classification. |
| **Synergistic Effects** | No data available |
| **Additional Information** | No data available |

## 12. ECOLOGICAL INFORMATION

| | |
|---|---|
| **Acute Aquatic Hazard** | No data available |
| **Chronic Aquatic Hazard** | No data available |
| **Persistence and Degradability** | No data available . Expected to be persistent. |
| **Bioaccumulative Potential** | No data available |
| **Mobility in Soil** | No data available |
| **PBT and vPvB Assessment** | No data available |
| **Other adverse effects** | No data available |

## 13. DISPOSAL CONSIDERATIONS

| | |
|---|---|
| **Product** | According to the Environmental Quality (Scheduled Wastes) Regulations 2005, scheduled waste has to be sent to a prescribed premise for recycling, treatment or disposal. Contact Fluoryx Labs to return unused product. |
| **Contaminated packaging** | Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. |
| **EPA Hazardous Waste Number (RCRA)** | Not regulated |

## 14. TRANSPORTATION INFORMATION

| | |
|---|---|
| **DOT (US)** | Not dangerous goods |
| **IMDG** | Not dangerous goods |
| **IATA** | Not dangerous goods |

## 15. REGULATORY INFORMATION

| | |
|---|---|
| **TSCA** | Not listed |
| **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** | No SARA hazards. |
| **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

**Further information:**

| | |
|---|---|
| NFPA Hazard Classification | Health: 2<br>Flammability: 0<br>Instability: 0<br>Special Hazards: None |
| HMIS Hazard Classification | Health: 1<br>Flammability: 0<br>Physical Hazard: 0<br>Personal Protection: X - See PPE section. |

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.

To our actual knowledge, the information contained herein is accurate as of the date of this document. However, neither Fluoryx Inc., nor any of its affiliates makes any warranty, express or implied, or accepts any liability in connection with this information or its use. This information is for use by technically skilled persons at their own discretion and risk and does not relate to the use of this product in combination with any other substance or any other process. This is not a license under any patent or other proprietary right. The user alone must finally determine suitability of any information or material for any contemplated use, the manner of use and whether any patents are infringed. This information gives typical properties only and is not to be used for specification purposes.

End of SDS