

Specification Sheet

Chemical Name		CAS No.
Methyl (2,2,2-trifluoroethyl) carbonate (TFEMC)		156783-95-8
Testing Parameters	Testing Method	Specification
Appearance	Visual Inspection	Colorless, clear liquid
Purity (wt%)	GC	≥99.5
Moisture (ppm)	Karl Fisher	≤150



Safety Data Sheet (SDS)**Methyl (2,2,2-trifluoroethyl) carbonate (TFEMC)****CAS Number:** 156783-95-8**SECTION 1: IDENTIFICATION**

- **Product Name:** Methyl (2,2,2-trifluoroethyl) carbonate
- **CAS Number:** 156783-95-8
- **Recommended Use:** Laboratory chemical, synthesis of substances
- **Uses Advised Against:** Not for non-exempt commercial purposes under TSCA
- **Supplier:** Automat Solutions, Inc.
- **Emergency Contact:** 510-982-6488

SECTION 2: HAZARD IDENTIFICATION

- **GHS Classification:**
 - Flammable Liquid – Category 3
 - Skin Irritation – Category 2
 - Eye Irritation – Category 2A
 - Specific Target Organ Toxicity (Single Exposure) – Category 3 (Respiratory)
- **Signal Word: Warning**
- **Hazard Statements:**
 - H226: Flammable liquid and vapor
 - H315: Causes skin irritation
 - H319: Causes serious eye irritation
 - H335: May cause respiratory irritation
- **Precautionary Statements:**
 - Keep away from ignition sources
 - Use explosion-proof equipment



- Avoid breathing vapors
- Wear protective gloves, clothing, and eye protection
- In case of fire: Use dry chemical, foam, or CO₂
- Store in a cool, well-ventilated place

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	Concentration
2,2,2-Trifluoroethyl methyl carbonate	156783-95-8	≥80% – ≤100%

SECTION 4: FIRST AID MEASURES

- **Inhalation:** Move to fresh air. Call a doctor if unwell.
- **Skin Contact:** Remove contaminated clothing. Rinse with water/shower.
- **Eye Contact:** Rinse with plenty of water. Seek medical attention.
- **Ingestion:** Drink water (two glasses max). Do not induce vomiting. Call a doctor.
- **Notes to Physician:** Symptomatic treatment.

SECTION 5: FIRE-FIGHTING MEASURES

- **Extinguishing Media:** Foam, CO₂, dry chemical
- **Hazards:** Combustible. Vapors may form explosive mixtures at elevated temperatures
- **Combustion Products:** Carbon oxides, hydrogen fluoride
- **Protective Equipment:** Full protective clothing and SCBA
- **Firefighting Instructions:** Remove containers from danger zone. Cool with water spray

SECTION 6: ACCIDENTAL RELEASE MEASURES

- **Personal Precautions:** Avoid inhalation. Ensure ventilation. Eliminate ignition sources
- **Environmental Precautions:** Prevent entry into drains or waterways



- **Cleanup Methods:** Use absorbent material (e.g. Chemizorb®). Dispose per regulations

SECTION 7: HANDLING AND STORAGE

- **Handling:** Use with adequate ventilation. Avoid vapor buildup. Ground equipment
- **Storage Conditions:** Keep tightly closed in a cool, dry place (2–30 °C). Hygroscopic
- **Storage Class:** 3 (Flammable Liquids)

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

- **Engineering Controls:** Use with local exhaust.
- **PPE Required:**
 - **Respiratory Protection:** Filter type AX (vapors/aerosols)
 - **Eye Protection:** Safety glasses (NIOSH/EN 166)
 - **Skin Protection:** Flame retardant, antistatic protective clothing
 - **Hand Protection:** Required

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

- **Form:** Liquid
- **Boiling Point:** 57–59 °C
- **Flash Point:** 38 °C (100 °F)
- **Molecular Weight:** 158.08 g/mol
- **Other data:** Odor, vapor pressure, density, solubility, etc. not available

SECTION 10: STABILITY AND REACTIVITY

- **Reactivity:** Vapor/air mixtures explosive at high temperatures
- **Stability:** Stable under ambient conditions
- **Incompatible Materials:** Strong oxidizers
- **Hazardous Decomposition Products:** CO, CO₂, HF



SECTION 11: TOXICOLOGICAL INFORMATION

- **Skin Irritation:** Causes irritation
- **Eye Irritation:** Causes serious irritation
- **Respiratory Sensitization:** May cause irritation
- **Carcinogenicity:** Not listed (IARC, NTP, OSHA)
- **Acute Toxicity, Reproductive Toxicity, Mutagenicity, Aspiration Hazard:** No data

SECTION 12: ECOLOGICAL INFORMATION

- **Ecotoxicity, Persistence, Bioaccumulation, Mobility:** No data available
- **Other:** Not manufactured with ozone-depleting substances

SECTION 13: DISPOSAL CONSIDERATIONS

- **Waste Treatment:** Dispose in accordance with local/national regulations. Do not mix with other waste.

SECTION 14: TRANSPORT INFORMATION

- **DOT / IATA / IMDG:**
 - **UN Number:** UN1993
 - **Proper Shipping Name:** Flammable liquid, n.o.s. (2,2,2-Trifluoroethyl methyl carbonate)
 - **Hazard Class:** 3
 - **Packing Group:** III
 - **Marine Pollutant:** No
 - **ERG Code:** 128

SECTION 15: REGULATORY INFORMATION

- **SARA 302, 304, 313:** Not subject
- **CERCLA RQ:** Not listed
- **Clean Air/Water Act:** Not listed
- **TSCA:** Contains substances not listed



SECTION 16: OTHER INFORMATION

- **Revision Date:** May 7, 2025
- **Disclaimer:** This SDS is provided as a safety guideline. Automat Solutions, Inc. is not responsible for any misuse or improper handling of this product.

