



## Silfluo LS-51

Trifluoroethyl Methacrylate

### Description

Silfluo LS-51 is 2,2,2-Trifluoroethyl methacrylate (TFEMA), a fluorinated acrylic ester monomer.

The molecule contains a trifluoroethyl ester group and a methacrylic double bond; it is not an organosilane. Undergoes free-radical homo- or copolymerization with vinyl and acrylic monomers under standard radical initiation conditions.

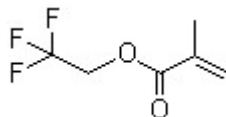
Incorporation into polymer backbones introduces low refractive index, reduced surface energy, and improved chemical and weathering resistance relative to unfluorinated acrylic copolymers.

Used in fluorinated acrylic resin synthesis, optical material formulations, and specialty coating and adhesive systems.

### Typical Physical Properties

Silfluo Code:	LS-51
Chemical Name:	2,2,2-Trifluoroethyl methacrylate
Synonyms	1,1-Dihydroperfluoroethyl methacrylate; 2-Methyl-2-propenoic acid 2,2,2-trifluoroethyl ester
CAS No. :	352-87-4
EINECS No. :	206-525-3
Molecular Weight:	168.11
Appearance:	Colorless transparent liquid
Purity (by GC, %)	97.0 min
Moisture, %:	≤0.30
Acid Value, mg(KOH).g	≤0.10
Inhibitor(MEHQ), ppm	100±10 or according to customer's order
Density (ρ <sub>20°C</sub> , g/cm <sup>3</sup> )	1.181
Refractive Index (n <sub>25.D</sub> )	1.36-1.362
Boiling Point:	59 °C (100 mmHg)
Flash Point:	16 °C Closed Cup

Chemical Structure:



### Applications

1. Fluorinated acrylic resin synthesis

Used as modifying monomer in the synthesis of fluorocarbon resins for weather-resistant architectural and automotive coating systems.

# Technical Data Sheet



[www.silfluosilicone.com](http://www.silfluosilicone.com)

## 2. Optical materials and photosensitive resins

Used as refractive-index-lowering monomer in optical fiber claddings, contact lens materials, and photosensitive resins for microelectronics.

## 3. Specialty adhesives and medical polymers

Used in adhesive and biomedical polymer formulations requiring low moisture absorption and chemical resistance.

### **Packaging**

In 500g, 1000g, 25kg pail, 200kg drum.

### **Safety and Storage**

Keep in a cool and dry place and avoid storage in direct sunlight. Shelf life is min. 9 months. It is shipped as hazardous substance. Packing Group: II UN No.:3272 Dangerous class: 3