Technical Data Sheet

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Silfluo LS-51

Trifluoroethyl Methacrylate

Description

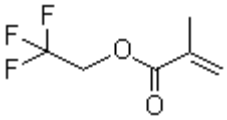
Silfluo LS-51 is 2,2,2-Trifluoroethyl methacrylate (TFEMA), a fluorinated acrylic ester monomer. The molecule contains a trifluoroethyl ester group and a methacrylic double bond; it is not an organosilane.

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 (ρ20°C, g/cm³)	1.181
Refractive Index (n25/D)	1.360-1.362
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.

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.

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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

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