Technical Data Sheet

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Silfluo LS-MA131

Alpha-Acryloxy Silane

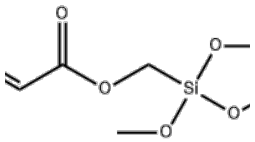
Description:

Silfluo LS-MA131 is Acryloyloxymethyltrimethoxysilane, an alpha-acryloxy functional silane.
The molecule contains an acryloxy group and a trimethoxysilyl group connected through a methylene bridge.
The acryloxy group participates in free-radical polymerization, including UV, EB, peroxide, and other radical-curing systems.
The trimethoxysilyl group hydrolyzes and bonds to hydroxylated inorganic surfaces or forms siloxane linkages under suitable moisture, pH, and catalyst conditions.
The alpha-silane structure gives different hydrolysis and condensation behavior compared with conventional gamma-functional acrylate silanes.
Used as coupling agent, adhesion promoter, or reactive silane additive in radical-curable systems, filled polymers, coatings, adhesives, and composites.
Cure behavior, adhesion, dielectric properties, optical properties, and moisture resistance require verification in the target formulation.

Typical Physical Properties

Silfluo Code:	LS-MA131
Chemical Name:	Acryloyloxymethyltrimethoxysilane
Synonyms	(Trimethoxysilyl)methyl acrylate
CAS No. :	21134-38-3
EINECS No. :	700-313-9
Molecular Formula:	$C_7H_{14}O_5Si$
Molecular Weight:	206.27
Appearance:	Colorless to light red transparent liquid
Purity (by GC, %)	97 min
Density (25°C, g/cm³)	1.040-1.060
Refractive Index (n25/D)	1.4100-1.4300
Boiling Point:	174°C
Flash Point:	50°C Closed Cup

Chemical Structure:



Applications:

1. Wire and cable compounds

Used as coupling additive in mineral-filled, peroxide-crosslinked EPDM and other insulating polymer systems. Verify dielectric properties, moisture resistance, mechanical properties, and aging behavior in the target cable compound.

2. UV / EB curable systems

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Used as reactive silane additive in UV- or EB-curable coatings, adhesives, inks, composites, and resin systems. Verify cure behavior, adhesion, and storage stability in the formulation.

3. Unsaturated polyester, vinyl ester, and acrylic composites

Used as coupling agent in glass fiber-reinforced or mineral-filled radical-curable composites. Test wet mechanical properties, flexural properties, and optical properties in the target system.

4. Adhesives and coatings

Used in radical-curable adhesives, sealants, and coating systems requiring acrylate functionality and alkoxysilane reactivity. Verify adhesion to glass, mineral, metal oxide, and selected polymer substrates.

5. 3D printing resins and fiber-optic coatings

Used in photocurable resin systems. Confirm cure speed, yellowing resistance, optical clarity, adhesion, and mechanical properties before commercial use.

Packing

In 25kg pail, 200kg drum and 1000kg IBC.

Safety and Storage

Keep in a cool, strictly dark, and well-ventilated environment.

The shelf life is a minimum of 6 to 9 months from the date of manufacture when stored at or below 25°C (refrigeration preferred) in tightly sealed, original unopened containers.

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