Technical Data Sheet

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Silfluo LS-AM31

Alpha-Functional Carbamate Silane (Water Scavenger)

Description:

Silfluo LS-AM31 is N-(trimethoxysilylmethyl)methyl carbamate, an alpha-functional carbamate silane. The molecule contains a carbamate group and a trimethoxysilyl group connected through a methylene bridge.

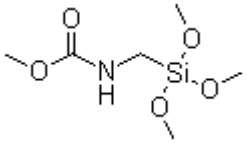
The alpha-silane structure gives different hydrolysis behavior compared with conventional gamma-functional silanes.

The trimethoxysilyl group reacts with moisture and forms siloxane linkages under suitable conditions. Used as moisture-scavenging additive in moisture-sensitive adhesive, sealant, coating, and polymer systems.

Moisture-scavenging efficiency, compatibility, viscosity stability, by-product profile, and storage stability require verification in the target formulation.

Performance equivalent to industry standards: Wacker GENIOSIL® XL 63.

Typical Physical Properties

Silfluo Code:	LS-AM31
Chemical Name:	(Methoxycarbonylaminomethyl)trimethoxysilane
Synonyms	Methyl n-(trimethoxysilylmethyl)carbamate; (Trimethoxysilylmethyl)carbamic acid methyl ester;
CAS No. :	23432-64-6
EINECS No. :	449-370-9
Molecular Formula:	$C_6H_{15}NO_5Si$
Molecular Weight:	209.27
Appearance:	Colorless clear liquid
Purity (by GC, %):	97min
Density (25°C, g/cm³):	1.10-1.20
Refractive Index (n25/D):	1.400~1.430
Boiling Point:	207°C
Flash Point:	79°C Closed Cup
Chemical Structure:	

Applications:

1. Moisture-curing adhesives and sealants

Used as moisture-scavenging additive in SMP, MS polymer, SPUR, polyurethane, and hybrid adhesive or sealant systems. Verify moisture content, viscosity stability, cure profile, and shelf-life performance in the target formulation.

2. Polyurethane coatings and primers

Used in moisture-sensitive one-part and two-part polyurethane coating and primer systems. Test filler moisture control, blistering tendency, gloss stability, and film performance in the complete formulation.

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3. Filled adhesive and sealant formulations
Used in highly filled formulations requiring filler moisture control. Verify compatibility with fillers, viscosity change, storage stability, and final cure behavior.
4. Reactive polymer modification
Used as reactive silane component or intermediate in silane-functional polymer development. Confirm reaction conditions, residual moisture, conversion, and by-product profile by synthesis testing.
5. Moisture-sensitive formulation systems
Used as formulation additive in systems requiring trace moisture control. Determine dosage, compatibility, and long-term storage behavior through application testing.

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

Safety and Storage
Store in a cool, dry, well-ventilated environment. Keep away from direct sunlight, heat, sparks, and open flames.
The product is highly reactive toward ambient moisture; rapid hydrolysis occurs if containers are improperly sealed.
Keep away from acids and alkalis; both catalyze hydrolysis.

Shelf life: 12 months minimum from manufacture date when stored at ⩽ 25°C in tightly sealed original unopened containers.

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