Technical Data Sheet

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Silfluo LS-GCF

Tetramethylguanidine Silane (Tin-Free Catalyst)

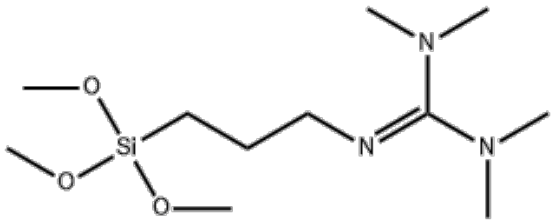
Description

Silfluo LS-GCF is 1,1,3,3-Tetramethyl-2-(3-trimethoxysilylpropyl)guanidine, a tetramethylguanidine-functional organosilane.
The molecule contains a tetramethylguanidine group and a trimethoxysilyl group.
The guanidine group provides strong organic base functionality.
The trimethoxysilyl group hydrolyzes and participates in siloxane formation or bonding to hydroxylated inorganic surfaces under suitable conditions.
Used as organobase silane additive, curing support additive, adhesion promoter, or reactive silane component in RTV silicone systems, enoxy-cure silicone formulations, adhesives, coatings, and surface treatment systems.
In catalyst-sensitive systems, LS-GCF provides an organic base option where metal-containing catalysts are not preferred.
Cure behavior, catalyst demand, adhesion, color stability, storage stability, and compatibility require verification in the target formulation.

Typical Physical Properties

Silfluo Code:	LS-GCF
Chemical Name:	1,1,3,3-Tetramethyl-2-(3-trimethoxysilylpropyl)guanidine
Synonyms	N-[Bis(dimethylamino)methylene]-3-(trimethoxysilyl)propylamine;N-[3-(Trimethoxysilyl)propyl]tetramethylguanidine
CAS No. :	69709-01-9
EINECS No. :	274-092-8
Molecular Formula:	$C_{11}H_{27}N_3O_3Si$
Molecular Weight:	277.44
Appearance:	Colorless or light yellow transparent liquid
Purity (by GC, %)	95.0 min
Density (ρ20°C, g/cm³)	0.950-0.970
Refractive Index (n25/D)	Approx. 1.455
Boiling Point:	323.3°C(760mmHg)
Flash Point:	149.3°C closed cup

Chemical Structure:



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Applications

1. Enoxy-cure RTV silicone systems

Used as curing support additive in de-acetone enoxy RTV silicone formulations, including systems using vinyltriisopropenoxysilane crosslinkers. Verify cure behavior, skin-over time, through-cure, adhesion, color stability, and shelf-life performance by formulation testing.

2. Neutral-cure silicone sealants

Used in neutral-cure silicone sealant systems requiring organic base functionality and silane reactivity. Verify compatibility with crosslinkers, fillers, plasticizers, and catalysts before scale-up.

3. Adhesives and coatings

Used as reactive silane additive or adhesion promoter in adhesive, coating, and primer systems. Verify adhesion, cure behavior, film compatibility, and storage stability in the target formulation.

4. Surface treatment systems

Used in surface treatment applications for glass, silica, mineral fillers, and metal oxide surfaces. Verify treatment efficiency, hydrolysis behavior, and substrate compatibility by application testing.

5. Chemical synthesis and intermediate use

Used as organobase silane intermediate or reactive component in chemical synthesis work. Verify reaction selectivity, conversion, residual base, by-products, and final structure by analytical testing.

Packaging

In 150kg drum

Safety and Storage

Keep in a cool and dry place and avoid storage in direct sunlight. Shelf life is min. 12 months. It is shipped as non-hazardous substance.

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