Technical Data Sheet

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Silfluo LS-AH13

Flexible Alpha-Diaminosilane

Description:

Silfluo LS-AH13 is N-(6-Aminohexyl)aminomethyltriethoxysilane, a dual-amine functional organosilane.

The molecule contains a primary amine, a secondary amine, a six-carbon hexyl spacer, and a triethoxysilyl group.

The aminomethyl structure places the secondary amine at the alpha position relative to silicon, which influences hydrolysis and condensation behavior compared with conventional gamma-aminosilanes.

The hexyl chain provides a flexible organic spacer between the amine functionality and the silane-reactive segment.

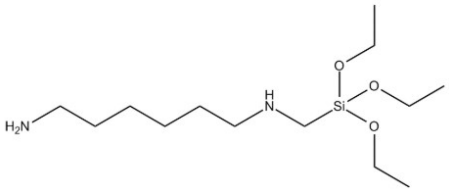
The amine groups interact with compatible resin systems including epoxies, polyurethanes, phenolics, and selected UV-curable systems.

The triethoxysilyl group hydrolyzes and reacts with hydroxylated inorganic surfaces including silica, mineral fillers, glass, and metal oxide surfaces.

Used as adhesion promoter, surface modifier, or reactive silane additive in UV-curable systems, epoxy formulations, polyurethane systems, sealants, primers, binders, and mineral filler treatments.

Cure behavior, flexibility, adhesion, and storage stability require verification in the target formulation.

Typical Physical Properties

Silfluo Code:	LS-AH13
Chemical Name:	N-(6-Aminohexyl)aminomethyltriethoxysilane
Synonyms	N-[(Triethoxysilyl)methyl]-1,6-hexanediamine
CAS No. :	15129-36-9
EINECS No. :	696-371-7
Molecular Formula:	$C_{13}H_{32}N_2O_3Si$
Molecular Weight:	292.49
Appearance:	Clear to straw liquid
Purity (by GC, %):	97
Density (25°C, g.cm³):	0.928
Refractive Index (n25.D):	1.4385
Chemical Structure:	

Applications:

1. UV-curable and epoxy systems

Used as adhesion promoter or reactive silane additive in UV-curable coatings, inks, adhesives, and 2K epoxy systems. Verify cure behavior, adhesion, flexibility, and storage stability by formulation testing.

2. Microparticle and filler modification

Used for surface treatment of micro-silica, mineral fillers, and pigments. The hexyl spacer and amine groups support interaction between inorganic particles and compatible organic polymer systems. Verify dispersion and mechanical properties in the target compound.

3. Adhesives and sealants

Used in silane-modified polymer, polyurethane, epoxy, and hybrid adhesive or sealant systems. Verify adhesion to aluminum, glass, mineral surfaces, and plastics by substrate-specific testing.

4. Primers and binders

Used in surface primers, resin binders, and foundry binder systems requiring amine functionality and alkoxysilane reactivity. Test handling strength, toughness, adhesion, and processing behavior in the target system.

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, and open flames.

The product is sensitive to ambient moisture; keep in tightly sealed original containers.

Mildly alkaline due to amino functionality; keep away from organic acids and strong oxidizing agents.

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