Technical Data Sheet

www.silfluosilicone.com

Silfluo LS-PEG10

PEG-Functionalized Silane

Description:

Silfluo LS-PEG10 is a PEG-functionalized organosilane, chemically identified as 3-[methoxy(polyethyleneoxy)propyl]trimethoxysilane.

The molecule contains a hydrophilic methoxy-terminated polyethyleneoxy (PEG) segment and a reactive trimethoxysilyl group.

The trimethoxysilyl group hydrolyzes in the presence of moisture to form silanols, which condense covalently with hydroxylated inorganic surfaces like glass, silica, and metal oxides.

The PEG segment reduces the water contact angle of the treated substrate.

It functions primarily as a hydrophilic surface modifier, anti-fog treatment, and aqueous dispersion additive..

Typical Physical Properties

Silfluo Code:	LS-PEG10
Chemical Name:	(Methoxypolyoxyethylene)trimethoxysilane
Synonyms	Methoxy PEG-Silane . PEG-functionalized trimethoxysilane
Appearance:	Colorless to pale yellow transparent liquid
Active Content:	> 95.0%
Density (25°C, g/cm³):	1.080~1.120
Refractive Index (n25.D):	1.4400~1.4600
Flash Point (Closed Cup):	> 100° C

Solubility: Highly soluble in water, alcohols, and polar solvents.

Applications:

1. Hydrophilic surface modification

Used for hydrophilic treatment of glass, silica, ceramic and metal oxide surfaces. Surface wettability and durability depend on substrate preparation, dosage and curing conditions.

2. Inorganic particle treatment

Used for treatment of silica, metal oxides, ceramic powders and selected mineral fillers to improve compatibility with waterborne or polar systems.

3. Waterborne coatings and inks

Used as a dispersion support additive or surface modifier in selected waterborne coatings, inks and resin systems.

4. Anti-fog and water-wettable surfaces

Used in hydrophilic coating systems where water-wettable surface behavior is required. Anti-fog performance should be tested in the final coating.

5. Laboratory and diagnostic surface modification

Used for PEG-silane modification of glass, microfluidic, sensor and other hydroxylated laboratory surfaces. Gelest lists methoxy(polyethyleneoxy) propyltrimethoxysilane grades as PEGylation reagents and hydrophilic silanes used to reduce non-specific protein binding.

6. Polar resin and rubber compounds

Used as a surface modifier for selected mineral fillers in polar resin or rubber systems.

Packing

In 25kg pail and 200kg drum.

Safety and Storage

Keep in a cool, dry, and well-ventilated environment. The shelf life is a minimum of 12 months from the date of manufacture when stored at or below 25°C in tightly sealed, original unopened containers.