Technical Data Sheet

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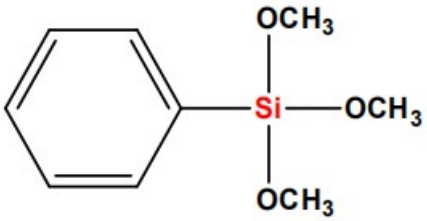
Silfluo LS-M11

Phenyl Functional Silane

Description

Silfluo LS-M11 is Phenyltrimethoxysilane, a trifunctional phenyl-functional trimethoxysilane.
The molecule contains one phenyl group and three hydrolyzable methoxy groups on silicon.
The trimethoxysilyl group hydrolyzes and condenses with hydroxylated inorganic surfaces or participates in sol-gel network formation; hydrolysis releases methanol.
The phenyl group raises thermal stability, refractive index, and UV resistance of derived siloxane networks relative to alkyl-functional analogs.
Used in sol-gel coating formulations, inorganic filler surface modification, epoxy molding compound (EMC) coupling, and phenyl silicone resin synthesis.
Performance equivalent to Momentive Silquest A-153, Evonik Dynasylan 9165, and Shin-Etsu KBM-103.

Typical Physical Properties

Silfluo Code:	LS-M11
Chemical Name	Phenyltrimethoxysilane
CAS NO.	2996-92-1
EINECS NO.	221-066-9
Formula	$C_9H_{14}O_3Si$
Appearance	Colorless Transparent Liquid
Density (ρ20℃, g/cm ^{3})	1.0620±0.0050
Refractive Index (n25/D)	1.4650–1.4750
Purity (by GC, %)	98 min
Molecular Structure	

Applications

1. Epoxy molding compound (EMC) and electronic encapsulants
Used as coupling agent in EMC formulations to improve adhesion between epoxy resin and silica fillers at lead-free soldering process temperatures.
2. Optical materials and LED encapsulants
Used as RI-raising intermediate in transparent polymer systems for LED encapsulants, lens coatings, and optical fiber cladding.
3. Phenyl silicone resin and heat-transfer fluid synthesis

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Used as synthetic intermediate in phenyl silicone resin and high-temperature fluid production.

4. Sol-gel and hybrid hard coatings

Used in co-hydrolysis sol-gel formulations for protective and decorative hybrid organic-inorganic coatings.

5. Inorganic filler surface modification

Used to surface-treat wollastonite, ATH, silica, and kaolin for improved dispersion and compatibility in high-temperature polymer composites.

Packing

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

Safety and Storage

Store in a cool, dry, well-ventilated place away from direct sunlight, heat, and open flames. Keep containers tightly sealed. Store at or below 25°C.

Shelf life: 24 months from manufacture date in original unopened containers stored at or below 25°C. Product beyond shelf life may still be usable; verify relevant properties before use.

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