



Silfluo LS-H12

Phenyl Functional Silane

Description:

Silfluo LS-H12 is Diphenylsilanediol (DPSD), a difunctional phenylsilanol.

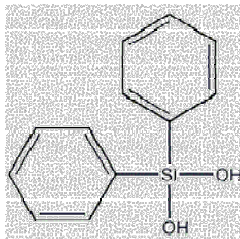
The molecule contains two phenyl groups and two silanol (Si - OH) groups on a single silicon atom.

The silanol groups undergo condensation with silanols, silanediols, or alkoxy-functional silanes under acid or base catalysis to form siloxane linkages.

The diphenyl substitution raises refractive index and improves thermal and oxidative stability of derived siloxane networks relative to dimethyl analogs.

Used as reactive monomer or chain modifier in phenyl silicone resin synthesis, sol-gel network formation, silica anti-structuring in HCR compounding, and as difunctional modifier in specialty polymer systems.

Typical Technical Properties

Silfluo Code:	LS-H12
Chemical Name:	Dihydroxydiphenylsilane
Synonyms:	Diphenylsilandiol; DPSD; diphenyl-silanedio
CAS No. :	947-42-2
EINECS No. :	213-427-4
Molecular Formula:	C ₁₂ H ₁₂ O ₂ Si
Molecular Weight:	216.32
Appearance:	White acicular crystal
Purity (by GC, %):	98.0 min grade; 99.0 min grade
Bulk Density (20°C, g/cm ³):	0.55
Refractive Index (nD 20°C):	1.615~1.6485
Melting Point:	138~142°C
Chemical Structure:	

Applications:

1. Phenyl silicone resin and sol-gel synthesis

Used as reactive monomer in the synthesis of high-refractive-index phenyl silicone resins and sol-gel networks for optical and encapsulant applications.

2. LED encapsulants and optical waveguides

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Technical Data Sheet



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Used in transparent phenyl silicone formulations for LED packaging and optical waveguide systems requiring high RI and optical clarity.

3. HCR anti-structuring agent

Used as silica surface passivation agent in silica-reinforced phenyl silicone rubber compounding to inhibit crepe hardening.

4. Specialty polymer modifier

Used as difunctional chain modifier in polyurethane, epoxy, and polyimide systems to modify thermal and mechanical properties.

5. Pharmaceutical and fine chemical synthesis

Used as organosilicon precursor in API synthesis and macromolecular compound preparation.

Package & Storage:

In 20kg pail, 80kg drum.

Keep in cool, dry and ventilated place. Keep away from sunlight and fire sources. Keep in unopened containers, shelf life is 24 months from the date of production.

Storage beyond the shelf life does not necessarily mean that the product is no longer usable. In this case however, the properties required for the intended use must be checked for quality assurance reasons.