Technical Data Sheet

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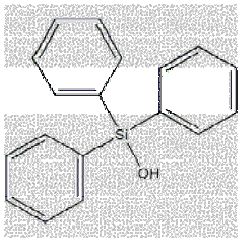
Silfluo LS-H13

Phenyl Functional Organosilane

Description:

Silfluo LS-H13 is Triphenylsilanol (Hydroxytriphenylsilane), a monofunctional phenylsilanol.
The molecule contains three phenyl groups and one silanol (Si－OH) group on a single silicon atom.
The silanol group undergoes condensation with silanols, alkoxy silanes, and hydroxylated surfaces under acid or base catalysis, or functions as a chain end-capping agent in siloxane synthesis.
Three phenyl groups per silicon atom give an exceptionally high refractive index and raise thermal and oxidative stability relative to lower-phenyl-content analogs.
Used as end-capping agent and structural monomer in high-RI phenyl silicone resin synthesis, as pharmaceutical synthesis intermediate, and as precursor for triphenylsilyl-terminated silicone fluids.
Performance equivalent to Dow Z-6800.

Typical Technical Properties

Silfluo Code:	LS-H13
Chemical Name:	Hydroxytriphenylsilane
Synonyms:	Triphenylsilanol; triphenyl-silano
CAS No. :	791-31-1
EINECS No. :	212-339-3
Molecular Formula:	$C_{18}H_{16}OSi$
Molecular Weight:	276.41
Appearance:	White granular crystal
Purity (by GC, %):	99.0 min
Bulk Density (25°C, g/cm^3):	0.70
Refractive Index (nD 20°C):	1.7770
Melting Point:	154°C
Flash Point:	>200°C
Chemical Structure:	

Acetone Solubility (grade A): > Complete dissolution, melting point ≥148°C
Acetone Solubility (grade B): > Incomplete dissolution, melting point ≥145°C

Applications

1. High-RI optical encapsulant synthesis

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Used as end-capping agent and phenyl-rich monomer in high-refractive-index silicone resin synthesis for LED and micro-LED packaging.

2. Pharmaceutical intermediates

Used as organosilicon protecting group or reactive precursor in multi-step API synthesis.

3. Extreme-temperature specialty polymers

Used as structural modifier in aerospace-grade silicone resins, adhesives, and potting compounds.

4. Triphenylsilyl-terminated silicone fluids

Used as precursor for synthesizing triphenylsilyl-terminated fluids and organic-inorganic block copolymers.

Packing

In 25kg drum.

Safety and Storage

Keep in a cool, dry, and well-ventilated environment, strictly avoiding direct sunlight, heat, and ignition sources. The shelf life is 36 months from the date of manufacture when stored in original unopened containers. Classified as a non-hazardous substance for transport and handling. Storage beyond the shelf life does not necessarily mean the product is unusable; however, the properties required for the intended use must be thoroughly checked for quality assurance reasons prior to application.

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