Technical Data Sheet

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Silfluo LR-PH101

Phenyl Hydrogen Silicone Resin

Description:

Silfluo LR-PH101 is a phenyl hydrogen polysiloxane crosslinking agent for addition-cure silicone systems. Characterized by a high refractive index (up to 1.5400) and optical clarity, this resin forms a crosslinked three-dimensional network when reacted with vinyl-functional silicones via platinum catalysis.

The cured siloxane matrix provides surface hardness, moderate flexibility, and resistance to thermal degradation, UV radiation, and chemical solvents. The phenyl substituents on the siloxane backbone raise the refractive index above that of standard methyl silicone crosslinkers, making LR-PH101 the appropriate crosslinker for high-refractive-index (HRI) optical encapsulant formulations where refractive index matching to LED chips or optical elements is required.

Three viscosity grades are available, differentiated by viscosity, hydrogen content, and refractive index to accommodate different formulation requirements.

Typical Technical Properties:

Silfluo Code:	LR-PH101	LR-PH101	LR-PH101
Appearance	Colorless to light yellow clear liquid	Colorless to light yellow clear liquid	Colorless to light yellow clear liquid
Viscosity (25°C, mPa.s)	6500~6800	2700~3800	40~80
Hydrogen Content(%)	0.22~0.25	0.22~0.26	0.46~0.52
Refractive Index	1.5250~1.5400	1.5310~1.5360	1.4910~1.4950
Volatile Content (150°C/3h, %)	≤1	≤1	≤1

Note: It could be customized upon requirement.



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Applications:

1. High-Power LED and Optical Encapsulation

The crosslinking resin for formulating high-refractive-index silicone encapsulants, optical lenses, and potting compounds for high-brightness LEDs, microelectronics, and optoelectronics requiring high light transmission.

2. Aerospace and Aviation Composites

Used as a crosslinking matrix component when combined with carbon fiber or glass fiber, producing rigid, heat-resistant, and ablation-resistant composite structures.

3. Dielectric Insulation

Formulated into electrical insulating varnishes for impregnating coils, fiberglass sleeving, and bonded mica insulation for high-voltage electronic components.

4. Industrial Protective Coatings

Used in the crosslinking formulation of high-temperature, corrosion-resistant protective coatings and linings for chemical piping, petroleum reactors, and pharmaceutical processing containers.

Package &Storage:

In 25kg pail, 200kg 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. Transported as non-hazardous substance.

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.

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