Silfluo LR-THP10

Hydroxyphenyl Silicone Resin Intermediate

Description:

Silfluo LR-THP10 is a high-temperature-resistant hydroxyphenyl silicone resin intermediate.

It is a silicone oligomer supplied in 100% active flake form. The siloxane oligomer contains phenyl and propyl groups at a ratio of 2.7:1 and silanol functionality.

It can undergo heat-activated condensation grafting with hydroxyl-containing organic resins, such as epoxies, polyesters, and acrylics. It can be chemically integrated into organic polymer matrices or used in cold-blended formulations to modify thermal stability, UV weatherability, and corrosion resistance of coating systems.

Typical Technical Properties:

Silfluo Code:	LR-THP10
Chemical Name:	Solid Silanol-Functional Phenyl Propyl
Synonyms:	Silicone Intermediate Hydroxyphenyl Silicone Resin Intermediate, Phenyl Propyl Siloxane Oligomer, Solid Flake Silicone Resin
Appearance	Solid flake
Functional Groups:	Silanol
Silicon Dioxide Content:	50~52%
Phenyl/Propyl Proportion:	2.7/1
Average Molecular-weight:	2600~3200
Solid Resin Content (1, 5g, 3h at 135°C) :	99% min
Softening Point:	40~50° C

Features

1. 100% active solid flake

Supplied as a solvent-free solid flake.

It can be used in powder coating systems or solvent-borne liquid compounding.

2. Phenyl.propyl structure

The 2.7:1 phenyl-to-propyl ratio combines phenyl and propyl groups in the resin structure.

The phenyl and propyl groups affect thermal behavior, compatibility, and flexibility in organic resin blends.

3. Silanol functionality

The resin contains hydroxyl groups.

These groups can participate in condensation copolymerization with organic resins.

4. Thermal modification

Used to modify high-temperature behavior of coating systems.

Film behavior depends on resin system, blending method, and curing conditions.

5. Weathering and UV exposure

Used in coating systems requiring weathering and UV exposure resistance.

Gloss and color retention depend on formulation and exposure conditions.

Applications

1. High-temperature industrial finishes

Used by grafting or cold blending in high-temperature coatings for industrial heaters, ovens, incinerators, and exhaust stacks.

2. Powder coatings

Used as a solid modifying resin in heat-resistant and weatherable powder coating systems.

3. Coil and architectural coatings

Used with polyesters to prepare silicone-modified polyester coil coatings for exterior metal cladding and roofing.

4. Maintenance and marine coatings

Used in industrial protective coatings for corrosion resistance and UV resistance.

5. High-heat electrical insulating varnishes

Used as a reactive modifier in dielectric coatings and impregnating resins for motors and transformers.

Package &Storage:

In 25kg bag.

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.