Technical Data Sheet

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Silfluo LR-TMP20

Organosilicon Intermediate

Description

Silfluo LR-TMP20 is a low-molecular-weight silanol-functional methyl phenyl silicone intermediate. It is supplied at 60% solids in a solvent system and can undergo condensation reactions with hydroxyl groups in organic resins, such as polyesters, epoxies, and acrylics.

It can be used by grafting or cold blending to modify organic coating systems for heat resistance and UV weatherability. Its silanol groups can also undergo self-condensation to prepare silicone resin binders.

Typical Technical Properties:

Silfluo Code:	LR-TMP20
Chemical Name: Synonyms:	Silanol-Functional Methyl Phenyl Silicone Intermediate Methyl Phenyl Siloxane Resin Intermediate, Hydroxy-Functional Silicone Resin, Silicone Intermediate for Organic Resin Modification
Appearance	Colorless or light yellow transparent liquid, opalescence is permitted
Solid content %	60 ±1
Viscotiy (4# cup, 25°C), S	10 -15
Acid value, mgKOH/g	≤ 10
Hydroxy content, %	3-5

Compatible Diluents: Ketones, esters, toluene, xylene (Diluents must be free of moisture, acids, alkalis, and amines to prevent cross-linking)

Features

1. Silanol functionality

LR-TMP20 contains 3–5% hydroxyl content. The silanol groups can react with hydroxyl groups in organic resins through condensation.

2. Heat resistance modification

LR-TMP20 can be used to modify acrylic, epoxy, and polyester coating systems for heat resistance up to 300–350°C.

3. Weatherability

LR-TMP20 can be used in exterior architectural and industrial coating systems requiring UV resistance, chalking resistance, and gloss retention.

4. Solvent compatibility

LR-TMP20 is soluble or miscible in aromatic hydrocarbons, esters, and ketones.

5. Resin modification and silicone resin synthesis

LR-TMP20 can be used as a modifying intermediate for organic-inorganic hybrid resins and as a precursor for crosslinked silicone binder systems.

Applications

1. High-temperature industrial coatings

Used as a modifying intermediate for engine exhaust paints, muffler coatings, industrial oven finishes, and boiler coatings operating up to 350°C.

2. Silicone-modified polyesters

Used for copolymerization with polyester resins in coil coatings for exterior metal cladding and roofing.

3. Protective finishes

Used for modification of epoxy and acrylic backbones in anticorrosive marine and offshore architectural coatings.

4. Industrial release and bakeware coatings

Used as a reactive resin modifier for heat-resistant release coatings for industrial cookware, baking sheets, and molding operations.

5. Silicone resin synthesis

Used in self-condensation polymerization to prepare methyl phenyl silicone resins for dielectric encapsulation and high-heat electrical insulation varnishes.

Package &Storage:

In 200kg drum.

Keep in cool, dry place. Avoid acid and alkali contact. Avoid direct sunlight. Transported as dangerous goods. The shelf life is half a year(can still be used if the product is qualified after the expiration date).