SH-223 Polysiloxane Resin

Product Property

SH-223 is a solvent-free, reactive methoxy-functional methylphenyl silicone oligomer. When combined with a curing catalyst, it can be used as a high-hardness, durable, room-temperature moisture-curable coating agent. Additionally, by mixing or co-reacting the methoxysilyl groups with organic resins containing reactive groups through a dealcoholization reaction, giving the resin heat resistance, weather resistance, and chemical resistance, and can also serve as a reactive diluent.

◆Low viscosity liquid ◆Flexibility ◆High temperature resistance

◆High inorganic content ◆ Therm setting ◆ Chemical resistance

◆ Good compatibility with organic resins ◆ Acid resistance

Application

- ✓ High-temperature resistant coatings
- ✓ Modifiers for coatings resin
- ✓ Coatings agents
- ✓ Introduce silicone components into other resins as modifier

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Color:	Colorless to light yellow
Appearance:	Clear and low viscous liquid
Active Ingredient:	＞98.00%
Specific Gravity:	1.00-1.20
Viscosity:	50-150cp
Flash Point:	>75℃

Method of application

SH-223 is crosslinked and cured through silanol condensation polymerization.

The fundamental principle is as follows:

2≡Si-OH → ≡Si-O-Si≡

Therefore, heat-resistant coatings or coating agents based on SH-223 can be formulated either as one-component or two-component systems.

One-component systems become highly moisture-sensitive once a catalyst is added. During

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	R&D and production, attention must be paid to the storage stability and pot life of the product. Two-component systems offer a longer storage period. Component A: SH-223 resin and other required components. Component B: Contains catalyst and other solvents (if needed). Recommended catalyst: EC-289M, with a resin-to-catalyst ratio of SH-223 : EC-289M = 11 :1 Suitable catalysts include acids, bases, and compounds of tin, zinc, titanium, and zirconium. Alkyl titanates are the recommended type. Suitable solvents include glycol ethers, among others. As a reactive diluent, SH-223 can react with active hydroxyl groups of organic resins as shown below: ≡Si-OH + HO-CR → ≡Si-OCR + H_2O Thus, SH-223 can be incorporated into organic resins to enhance the heat resistance of the final product.
Storage	Store in a dry, well-ventilated place at temperatures between -5°C to 40°C, protected from direct sunlight. Keep tightly sealed. Shelf life: 12 months (unopened).
Packaging	25kg/drum；200kg/drum
Discharge	Do not discharge it into the wastewater system, put it in a specific container for professional disposal.
Emergency treatment	1. In case of leakage or spillage, collect it in a container and clean the ground pollutants with a cloth. 2. If this product accidentally come into contact with the eyes, rinse immediately with plenty of water for at least 15 minutes. If discomfort persists, seek medical attention immediately. 3. If this product comes into contact with the skin, wash with water and soap. Seek medical attention immediately if discomfort occurs. 4. If discomfort occurs from accidental inhalation of spray, immediately move to fresh air and seek medical attention without delay.