SIO-4020 Polyester-Modified Silicone Resin

Resin Characteristics and Applications:

SIO-4020 has a silicon content of 40% and is characterized by excellent high and low-temperature resistance, as well as water-repellent and moisture-resistant properties. It offers outstanding weather resistance and chemical stability.

Once fully cured, the resin achieves high hardness (≥5H), high gloss, good fullness, and exceptional high-temperature yellowing resistance. This makes it highly suitable for use in high-temperature resistant coatings, non-stick coatings for kitchen appliances, iron coatings, coil coatings, and as a base resin for specialty coatings.

Specifications:

Parameter	Specification
Appearance	Colorless transparent liquid
Solid Content	59±2% (1 hour at 150°C)
Viscosity	300~800 S (Ford cup #4, 25°C)
Acid Value	4～7 mg KOH/g
Clear Varnish Film Hardness	≥5H (China Pencil Hardness)

Curing Method:

SIO-4020 is cured by high-temperature baking, with the optimal condition being 250°C for twenty minutes. It can be mixed with amino resin, where the amino resin content should be around 10% of SIO-4020. It is important to note that adding amino resin may cause slight yellowing at high temperatures.

Precautions:

When using this product, it is essential to ensure that the solvents used for dilution do not contain water, sulfur compounds, pyridine, or its impurities, as these can negatively affect the adhesion, drying, and other performance characteristics of the resin film. PMA is the recommended solvent, and xylene should be avoided. A small amount of butanol or butyl ester can be added to the mixture.

During processing, a significant amount of flammable and explosive solvent may evaporate, so proper ventilation and fire prevention measures must be in place, and ignition sources must be strictly excluded. Operators should take appropriate protective measures.

All equipment and utensils used during processing must be kept clean to prevent contamination from dust, foreign matter, or moisture.

Additionally, the product should be stored away from acids, bases, organic acid salts, and amine compounds, as these can accelerate curing and impact heat resistance and electrical properties.

Storage:

The storage period for SIO-4020 is tentatively set at six months. It should be stored in a ventilated, cool, and dry place, away from direct sunlight. It should also be protected from contamination by acids and bases and kept away from fire and heat sources.

Packaging:

SIO-4020 is available in 200 kg large white iron drums and 20 kg small white iron drums.

The above information is provided based on the product's condition and current knowledge, serving only as an introduction and usage suggestion for our product. It should not be construed as a guarantee of specific characteristics for particular applications. Therefore, we do not assume any responsibility for this introduction and suggestion.