

SINOSIL™ 9280 Thermally Conductive Silicone Encapsulant

INTRODUCTION

SINOSIL™ 9280 is a two-part, addition-cure silicone thermally conductive encapsulant designed for potting and protecting electronic and electrical assemblies. It can be cured at room temperature or by heat acceleration to form a flexible silicone elastomer with good thermal conductivity, electrical insulation, and environmental durability.

SINOSIL™ 9280 is suitable for applications requiring both heat dissipation and long-term protection of sensitive electronic components.

KEY FEATURES

- Thermal conductivity of 1.2 W/m·K
- Good flowability and self-leveling properties
- Excellent air-release characteristics
- Good resistance to filler settling during storage
- Room-temperature cure or heat-accelerated cure
- Excellent thermal shock resistance
- UL 94 V-0 flame retardancy
- Good electrical insulation performance

PHYSICAL PROPERTIES

Uncured at 25°C	Value
Mix ratio by weight/volume	1:1
Color - Part A	White
Color - Part B	Blue/Grey
Color - Mixed	Blue/Grey
Viscosity - Part A (mPa·s)	1,700-3,300
Viscosity - Part B (mPa·s)	1,500-3,100
Viscosity - Mixed (mPa·s)	1,900-3,500
Density (g/cm³)	1.57-1.77
Pot life at (25°C, hour)	> 2

After curing (Min. 30 min at 80°C)	Value
Hardness (Shore A)	40
Thermal conductivity (W/m·K)	1.2
Tensile strength (MPa)	Min.0.75
Elongation at break (%)	Min.40
Dielectric strength (kV/mm)	Min.10

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Volume resistivity ($\Omega \cdot \text{cm}$)	Min. 1×10^{14}
UL Flammability Rating	V-0

These values are typical and are not intended for use as specifications.

APPLICATIONS

SINOSIL™ 9280 is designed for potting and encapsulating electronic and electrical assemblies where both thermal management and environmental protection are required. Typical applications include photovoltaic inverters, energy storage systems, automotive electronics, inductors, magnetic components, high-power modules, and other industrial electronic devices requiring efficient heat dissipation, electrical insulation, and long-term reliability.

USAGE GUIDELINES

Before use, thoroughly stir Parts A and B separately and allow them to stand for approximately 15 minutes to release any entrapped air. Mix the two components at a 1:1 ratio by weight or volume using low-speed agitation until a uniform mixture is obtained. After mixing, vacuum degassing for 3–5 minutes is recommended to minimize air entrapment and ensure optimal encapsulation quality. The dispensing rate, filling path, and dispensing volume should be adjusted according to the component design and potting requirements.

SINOSIL™ 9280 can be cured at room temperature or by heat acceleration. Typical heat-cure conditions are 80°C for 30 minutes or longer, or 100°C for 20–40 minutes. Actual cure time may vary depending on component size, thermal mass, dispensing volume, and processing conditions.

Certain substances may inhibit cure and should be avoided, including condensation-cure silicone materials and their by-products, amines, sulfur-containing compounds, phosphorus-containing compounds, organotin compounds, and other heavy metal compounds. When substrate composition or surface compatibility is uncertain, preliminary testing is recommended before production use.

PACKING

SINOSIL™ 9280 is supplied as a two-part system, with both Part A and Part B packaged in 25 kg pails.

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STORAGE

Store SINOSIL™ 9280 in the original unopened containers in a cool, dry place away from direct sunlight and sources of heat. The shelf life is 6 months from the date of manufacture.

HANDLING

This document does not contain the product safety information required for safe use. Before handling, please refer to the product and safety data sheets, as well as container labels, for information on safe usage, physical hazards, and health risks. Safety Data Sheet is available on the website, from the distributor, or by contacting SiSiB customer service.

NOTE

All information in the leaflet is based on our present knowledge and experience. We reserve the right to make any changes according to technological progress or further developments. However, as the conditions and methods of use of our products are beyond our control, this information should not replace customer testing to ensure that our products are safe, effective, and fully compatible with the intended end use.

SiSiB SILICONES' sole warranty is that our products will meet the sales specifications in effect at the time of shipment. In the event of a warranty breach, your exclusive remedy is limited to either a refund of the purchase price or the replacement of any product that is shown not to meet the warranty.