TECHNICAL DATA SHEET

SilSo Cool 21311
2-part thermally conductive encapsulant

Description

This is a two-component, 100% silicone solids, thermally conductive elastomer designed for electronic potting and roller applications.

Key Features

- Flame retardant
- High thermal conductivity
- Low viscosity
- Electrically insulating

Application

TIM automotive, EV and electronics potting

Use and Cure Information

IMPORTANT:

The 'A' part of the product contains the platinum catalyst, great care should be taken when using automatic dispensing equipment. Please ensure that it is not contaminated by residual hydride containing rubber in the dispensing equipment, as curing will result. If in doubt, it's advised to thoroughly purge the equipment with a suitable hydrocarbon solvent or silicone fluid.

Mixing

Both the 'A' and 'B' parts should be well stirred to ensure the material is uniform and any settled the fillers have been remixed.

In order to achieve optimum performance, the same "A" and "B" side lot number should be used.

Place the required amount of 'A' and 'B' parts by weight at the mix ratio shown opposite, in a clean plastic or metal container of approximately 3 times their volume, and mix until the color of the mixture is uniform. For best results, we recommend degassing. Degas by intermittent evacuation, the larger volume of the mixing vessel helps prevent overflow during this operation. In the case of automatic dispensing with static mixing head, the two components should be degassed before processing. Recommended vacuum conditions are 30-50 mbar intermittently over 5-10 minutes. Cast the mixture either by gravity or pressure injection.

Property	Test Method	Value
Uncured Product		
Appearance		**Viscous liquid**
Color A		**Off white**
Color B		**Gray**
Density A	BS ISO 2781	**2.82**
Density B	BS ISO 2781	**2.82**
Mix Ratio By Weight		**1:1**
Pot Life mins at 23°C/73°F		**>50 mins**
Self Bonding		**No**
Viscosity A	Brookfield	**23900 cP**
Viscosity B	Brookfield	**22000 cP**
Viscosity Mixed	Brookfield	**23000 cP**
Cured Product		
24 hours at 23+/-2°C		
Color		**Gray**
Hardness Shore A	ASTM D 2240-95	**45**
Max Working Temp		**200 °C / 392 °F**
Min Working Temp		**-50 °C / -58 °F**
Thermal Conductivity		**2.3 W/mK**
Electrical Properties		
Volume Resistivity (Ohms cm)	ASTM D-257	**3.8E+14 ohms cm**
Storage		
Max Storage Temperature		**30 °C / 86 °F**
Shelf Life		**12 mths**

Inhibition of Cure

Great care must be taken when handling and mixing all addition cured silicone elastomer systems, ensuring that all the mixing tools (vessels and spatulas) are clean and constructed in materials which do not interfere with the curing mechanism. The cure of the rubber can be inhibited by the presence of compounds of nitrogen, sulphur, phosphorus and arsenic; organotin catalysts and PVC stabilizers; epoxy resin catalysts and even contact with materials containing certain of these substances e.g. molding clays, sulphur vulcanized rubbers, condensation cure silicone rubbers, onion and garlic.

Curing Conditions

The data offers a guide to the rate of cure at various temperatures, mixing of the components at temperatures between 15 and 25°C is recommended to ensure adequate pot life for degassing and handling. The pot life can be extended to several hours by chilling the components before mixing.

It is important to check the compatibility in preliminary tests if unknown substrates are used.

Health & Safety

Safety Data Sheets available on request.

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