# **BS-2000 V112**

# Thermally Conductive Gap Filler

- High temperature applications
- Silyl modified Polymer (SMP) & Silicone - free Chemistry
- Stable thermal performance during aging test

BS-2000 V112 is a premium, two-component, silicone-free thermal paste designed for highly efficient heat dissipation in power electronics and E-Mobility applications, such as inverters and Battery Management Systems (BMS). Featuring high thermal conductivity and non-abrasive fillers, this thermal paste ensures heat transfer while protecting critical components. BS-2000 V112 is user-friendly, effectively filling and smoothing gaps between heat-generating parts and cooling plates, thus optimizing thermal management.

#### **Properties**

Physical Properties	Part A	Part B	Unit
Consistency, appearance	Pasty, Blue		-
Density	2.5	1.9	g/cm <sup>3</sup>
Density mix	2.45		g/cm <sup>3</sup>
Viscosity plate/plate (constant 10 s <sup>-1</sup> at 23 ℃)	140 <u>+</u> 30	55 <u>+</u> 30	Pa-s
Viscosity mix plate/plate (constant 10 s <sup>-1</sup> at 23 °C)	160 <u>+</u> 30		Pa-s
Curing time at room temperature	24		hours

Property	Value	Unit
Chemistry	SMP/ Silicone-free	-
Max Operating Temperature	150	°C
Decomposition Temperature	> 220	°C
Thermal Conductivity	>2	W/m-K
Dielectric Strength	>10	kV/mm
Volume Resistivity	> 1 x 10 <sup>10</sup>	Ω-cm
СТІ	>600	-
Filler Type	Non-abrasive ceramic fillers	-
Flammability rating	UL94- V0	-
Pot life	~30	min
Mixing Ratio (A:B)	10:1	by volume

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Mechanical Properties	Va	Unit	
	Initial properties (cured 7d at RT)	After aging (stored 150 °C at 1000h)	
Tensile Strength	~1.15	~1.15	MPa
Lap shear strength	~0.5	~1.6	MPa
Elongation at break	~19	~9.2	%
Shore A	~54	~80	-

## **Applications**

BS-2000 V112 SMP chemistry shows excellent adhesion over the entire service life. Although low in thermal conductivity, the chemistry provides consistent thermal performance overall. This material is specifically designed for applications such as:

- Power electronics
- Battery Management Systems (BMS)
- Inverters
- E-Mobility

### **Material Application**

- Simple processing using dispensing equipment customized cartridges.
- Ease of automation process
- Processing at elevated temperature (60 °C) decreases viscosity which enables excellent dispensing properties
- The material can be removed in a non-crosslinked state by simple wiping, and with commercially available solvent/cleaners
- Crosslinking occurs 24h after mixing.

#### Storage and Shelf life

Shelf life in originally sealed packaging is 3 months Storage and transport conditions should be between 0°C to 45 °C. Pot life at room temperature -  $\geq$  30 minutes

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