

Fujipoly NEW Product Technical Information

SARCON[®] SPG-30B

Highly Thermal Conductive, Electricity Insulative, Low Viscosity type Silicone Compound

1. Features

Sarcon SPG-30B is highly conformable / thermally conductive, low viscosity and easier dispensable type silicone compound. It provides a thermal solution for the recent trends of higher frequencies and integration in the development of electronic devices. **Sarcon SPG-30B** easily forms and adheres to most of surfaces, shapes, and sizes of components.

Sarcon SPG-30B makes complete and reliable physical contact with the component and opposing surfaces. It provides handling properties that are superior to thermal grease & potting materials.

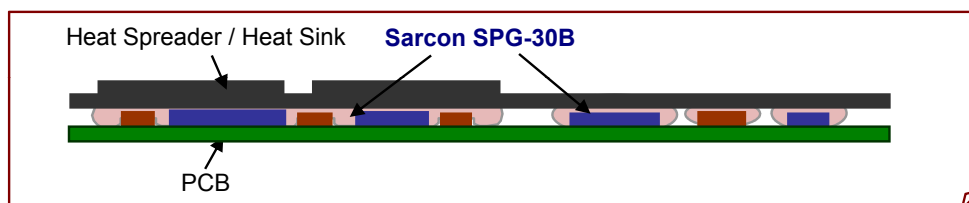
- 1) Suitable for filling the delicate gaps and still provide superior thermal transfer.
- 2) Highly conformable with very low compression forces.
- 3) Has excellent vibration absorption capabilities.
- 4) Maintains thermal properties across a wide temperature range.
- 5) Can be used to "Form-In-Place" and will remain form stable.
- 6) Requires no heat curing.
- 7) Will not cause corrosion on any metal surface.

2. Recommended application

Thermal transfer from heat-generating device to heat spreader or heat sink.

3. Description

Material Code	Construction
Sarcon SPG-30B	High Viscosity type Silicone compound



4. Typical Properties

4-1. Typical Material Properties

Item	Unit	SPG-30B	Test method
Specific Gravity	-	3.2	JIS K 6220/(ASTM D792)
Viscosity	Pa·s	2,600	Fujipoly test method *1
Thermal Conductivity	W/m·K	3.1	Fujipoly test method *2
Dielectric Constant	50 Hz	14.6	JIS K 6911 : 2006/ ASTM D 150
	1k Hz	14.3	
	1M Hz	14.4	
Dissipation Factor	50 Hz	1.2×10^{-2}	
	1k Hz	3.6×10^{-3}	
	1M Hz	2.8×10^{-3}	
Volume Resistivity	MΩ·m	6.9×10^5	JIS K 6249 / ASTM D257

*1: Accurate Rotary Viscometer (RV1) Shearing Speed:1.0 (1/S), Gap:0.5mm

*2: Hot Disk method tester (TPA-501) Based on ASTM D2326 equivalent.

4-2. Typical Product Properties

Item	Unit	SPG-30B	Test method
Operating Temperature Range	°C	-40 to +150	
Thermal Resistance	°C·cm ² /W	2.1	ASTM D5470 equivalent ^{*3}

*3: Contact Surface: 3.14 cm², (0.49 inch²) Filled material's weight: 1.0g for 1.0mm gap

4-3. Typical Durability (Reliability)

Thermal resistance under Heat, Cold, Humid and Thermal Shock conditions.

+70°C Aging						120°C Aging					
Gap	Initial	100 h	250 h	500 h	1,000 h	Gap	Initial	100 h	250 h	500 h	1,000 h
1.0mm	2.1	2.1	2.1	2.1	2.1	1.0mm	2.1	2.1	2.1	2.1	2.1

+150°C Aging						-40°C Aging					
Gap	Initial	100 h	250 h	500 h	1,000 h	Gap	Initial	100 h	250 h	500 h	1,000 h
1.0mm	2.1	2.1	2.2	2.4	2.6	1.0mm	2.1	2.1	2.1	2.1	2.1

+60°C 95%RH Aging						-40°C↔+125°C Heat Shock					
Gap	Initial	100 h	250 h	500 h	1,000 h	Gap	Initial	100 h	250 h	500 h	1,000 h
1.0mm	2.1	2.1	2.1	2.1	2.1	1.0mm	2.1	2.2	2.1	2.1	2.2

Remark: *Unit of Thermal Resistance: °C·cm²/W based on ASTM D5470 equivalent method

*Contact Surface: 3.14 cm², (0.49 inch²)

*Filled material's weight: 1.0 g for 1.0 mm gap

4-4. Oil Separation

+125°C Aging						
	Initial	100 h	250 h	500 h	1,000 h	
SPG-30B	0.0	0.0	0.0	0.0	0.0	

Remark: *Unit of Oil Separation : wt%

*ASTM D5470 equivalent method

Notes:

- Some silicone oil may exude from the product according to operating conditions.
- Some low molecular siloxane may vaporize from the product according to operating conditions.
- It is advisable to use the product under recommended operating condition. Some more silicone oil may exude from the product if it was used over the recommended condition.
- It is advisable to use the product under parallel and even compression. Some more silicone oil may exude from the product if it was used under excessive or partial stress.

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