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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.

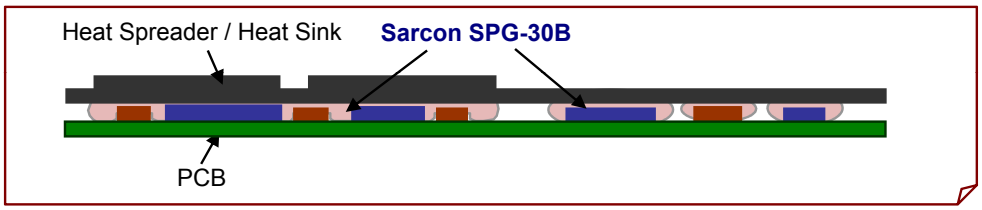
1) Suitable for filling the delicate gaps and still provide superior thermal transfer.
2) Highly conformable with very low compression forces.
3) Has excellent vibration absorption capabilities.
4) Maintains thermal properties across a wide temperature range.
5) Can be used to "Form-In-Place" and will 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.

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4-2. Typical Product Properties

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

*3: Contact Surface: 3.14 cm^2, (0.49 inch^2) 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℃ Aging

Gap	Initial	100 h	250 h	500 h	1,000 h
1.0mm	2.1	2.1	2.1	2.1	2.1

120℃ Aging

Gap	Initial	100 h	250 h	500 h	1,000 h
1.0mm	2.1	2.1	2.1	2.1	2.1

+150℃ Aging

Gap	Initial	100 h	250 h	500 h	1,000 h
1.0mm	2.1	2.1	2.2	2.4	2.6

-40℃ Aging

Gap	Initial	100 h	250 h	500 h	1,000 h
1.0mm	2.1	2.1	2.1	2.1	2.1

+60℃ 95%RH Aging

Gap	Initial	100 h	250 h	500 h	1,000 h
1.0mm	2.1	2.1	2.1	2.1	2.1

-40℃⇔+125℃ Heat Shock

Gap	Initial	100 h	250 h	500 h	1,000 h
1.0mm	2.1	2.2	2.1	2.1	2.2

Remark: *Unit of Thermal Resistance: ℃·cm^2/W based on ASTM D5470 equivalent method
*Contact Surface: 3.14 cm^2, (0.49 inch^2)
*Filled material's weight: 1.0 g for 1.0 mm gap

4-4. Oil Separation

+125℃ 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.