

Fujipoly Data Sheet

SARCON SPG-70A

Form in Place Gap Filler Type

FEATURES

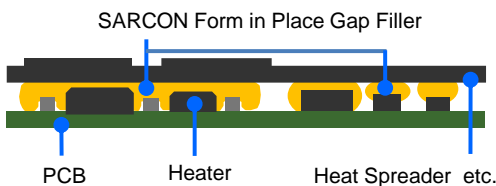
Highly Thermally Conductive and Electricity Insulative Silicone Compound.

SARCON Form in Place Gap Filler Type is highly conformable and highly thermal conductive type silicone compound with very low compression force. It provides a thermal solution for the recent trends of higher frequencies and integration in the development of electronic device. SARCON Form in Place Gap Filler Type is suitable for filling the delicate gaps and still provide superior thermal transfer.

CONSTRUCTIONS

Series	Characteristics	Packaging Options
SARCON SPG-70A	Highest Heat Transferring and high flow rate Thermal Conductivity : 7.0W/m-K by using Hot Disk	<ul style="list-style-type: none"> • Syringe : 30cc • Cartridge : 325cc • Custom Packaging : Available on Request

RECOMMENDED APPLICATION



- Suitable for filling the delicate gaps and still provide superior thermal transfer.
- Highly conformable with very low compression forces.
- Has excellent vibration absorption capabilities.
- Maintains thermal properties across a wide temperature range.
- Can be used to "Form-In-Place" and will remain form stable.
- Requires no heat curing.

THERMAL RESISTANCE

Unit : K-cm²/W (K-in²/W)

Gap	SPG-70A
0.5mm / 0.02in	0.8 (0.12)
1.0mm / 0.04in	1.7 (0.26)

Measured by using ASTM D5470 modified, refer to Fujipoly Test method FATM P-3031.

TYPICAL PROPERTIES

Properties	unit	SPG-70A	Test method	
Physical Properties	Color	-	Sky Blue	Visual
	Specific Gravity	-	3.2	ASTM D792
	Flow rate	g	65	Fujipoly Original
	Weight Loss	wt%	0.08	Fujipoly Original
	Consistency	-	184	ASTM D1403
Electrical Properties	Volume Resistivity	Ohm-m	3.2×10^9	ASTM D257modified
Thermal Properties	Thermal Conductivity	W/m-K	7.0	by Hot Disk, ISO 22007-2
	Recommended Operating Temp.	°C	-40 to +150	-
		°F	-40 to +302	
Extractable Volatiles	wt%	D ₃ to D ₁₀ D ₁₁ to D ₂₀	0.0010 0.0025 ^{*1}	Gas Chromatography

a) Flow rate : Syringe PSY-30F, Time 100sec, Pressure 0.5MPa

b) Weight Loss at 150°C(302°F) x24hrs , amount of sample: 2cm³ (0.12in³).

*1 : D₁₁-D₁₉ (D₂₀ cannot be measured)

COMPRESSION FORCEUnit : N/6.4cm² (psi)

1.0mm Gap	SPG-70A	0.5mm Gap	SPG-70A
0.9mm / 0.35in	25 (5.7)	0.45mm / 0.18in	58 (13.1)
0.8mm / 0.32in	29 (6.6)	0.40mm / 0.16in	63 (14.3)
0.7mm / 0.28in	34 (7.7)	0.35mm / 0.14in	73 (16.5)
0.6mm / 0.24in	42 (9.5)	0.30mm / 0.12in	87 (19.7)
0.5mm / 0.20in	52 (11.8)	0.25mm / 0.10in	109 (24.7)
Sustain	4 (0.9)	Sustain	11 (2.5)

Test method : Measured by ASTM D575-91 for reference

- Specimen Area : DIA.28.6mm (1.13in) • Platens Area : DIA. 28.6mm (1.13in) • Sustain : Sustain at 0.5mm/0.25mm for 1 minute
- Compression Velocity : 5.0mm/minute • Setting Gap : 0.5mm or 1.0mm (Initial Gap)
- The specimen is pressed till setting a gap, and then waiting for the load to settle down.

DURABILITY

Thermal Resistance

Unit : K-cm²/W (K-in²/W)

Series	Gap	Initial	+70°C	+150°C	-40°C	+60°C/95%RH	-40°C↔+125°C /30min each
			After 1,000hrs	After 1,000hrs	After 1,000hrs	After 1,000hrs	After 1,000hrs
SPG-70A	0.5mm / 0.02in	0.8 (0.12)	0.7 (0.11)	0.7 (0.11)	0.8 (0.12)	0.7 (0.10)	0.7 (0.11)
	1.0mm / 0.04in	1.7 (0.26)	1.5 (0.23)	1.7 (0.26)	1.7 (0.27)	1.47 (0.23)	1.61 (0.25)

Thermal Conductivity : Measured by using ASTM D5470 modified, refer to Fujipoly Test method FATM P-3031.

(Specimen is sandwiched between aluminum blocks.)

HANDLING NOTES

- It is recommended to compress the material with the equal ratio on the whole surface. Partial excessive stress may also result in excessive silicone oil exudation.

WARRANTY STATEMENT

- Fujipoly has been utilizing Hot Disk method and TIM Tester method since Fujipoly defined them as Fujipoly standard.
- Properties of the products may be revised due to some changes for improving performance.
- Properties values in this document are not specification or guaranteed.
- This product is made of silicone, and silicone oil may exude from the product.
- This product is made of silicone, and low molecular siloxane may vaporize depending on operating conditions.
- The product is designed, developed, and manufactured for general industrial use only. Never use for medical, surgical, and/or relating purposes. Never use for the purpose of implantation and/or other purposes by which a part of or whole product remains in human body.
- Before using, a safety must be evaluated and verified by the purchaser.
- Contents described in the document do not guarantee the performances and qualities required for the purchaser's specific purposes. The purchaser is responsible for pre-testing the product under the purchaser's specific conditions and for verifying the expected performances.
- Statements concerning possible or suggested uses made herein may not be relied upon, or be constructed, as a guaranty of no patent infringement.
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