

Fujipoly New Product Technical Information

NEW PRODUCT : SARCON[®] XR-m

Highly Thermal Conductive and Non-Flammable Silicone Gel Sheets

1. Features:

Sarcon[®] XR-m is highly conformable/thermally conductive gel materials, **17watt/m-K** (electrically non-conductive) in a versatile sheet form that easily fit and adhere to most of shapes and sizes of components, and makes reliable and complete physical contact.

The surface consistency of the pads is excellent for filling air gaps and uneven surfaces.

- 1) Gives the lowest thermal resistance.
- 2) Has a flame retardancy of UL specification 94 V-0.
- 3) Low Molecular Siloxane content is very low.

2. Variety of Sarcon[®] XR-m products:

Description	Construction	Application Guidelines
Sarcon[®] ## X-m (30X-m, 50X-m)	Silicone compound	Between chassis wall and other surface. Between CPU and heat sink. Between semiconductor and heat sink.
Sarcon[®] ### X-Hm (100/150/200X-Hm)	Silicone compound with hardened top surface	

* Can be designed for custom applications. (Cutting. Punching)

* ##, ### refers to a thickness of sheet.

3. Typical Product Properties:

3-1. Thermal properties and Flame retardancy: (Typical Value)

Item	Sarcon [®] XR-m		Test Method
Thermal Conductivity (Watt/m-K)	17		ASTM D 5470
Thermal Resistance (°C-inch ² /Watt)	30X-m	0.07	ASTM D 5470
	50X-m	0.10	
	100X-Hm	0.14	
	150X-Hm	0.19	
	200X-Hm	0.24	
Flame Retardancy	V-0		UL94 standard

3-2. Extractable Volatile (Low Molecular Siloxane Content): (Typical Value)

Dn	Sarcon® XR-m	Test Method
Total less D ₂₀	Less than 0.0010 wt%	Gas Chromatographic Analysis by Abstracting Acetone

3-3. Compression VS Compression Load: (Typical Value)

Compression Rate		30X-m	50X-m	100X-Hm	150X-Hm	200X-Hm
Load (kgf/inch ²)	10%	4	4	10	18	16
	20%	15	15	34	49	46
	30%	31	39	65	84	78
	40%	49	69	99	113	99
	50%	70	102	133	136	116
	Sustain 50%	63	90	66	55	44

Remark/ Test method: Fujipoly Test Method:

 Compression Velocity: 5.0mm/minute with 200kgf load Cell Compression Area: 6.25cm² (25mm x 25mm)
 Sustain 50% at 1 minute after

4. Typical Material Properties:

Item	Unit	XR-m	Test Method	Specimen
Color	—	Gray	Visual	—
Specific Gravity		3.2	JIS K 6220/ASTM D 792	A
Hardness	ASKER C (Shore 00)	65 (80)	JIS K 7312 (ASTM D 2240)	B (-)
Tensile Strength	MPa	0.5	JIS K 6251(#2 Die)/ASTM D412	A
Elongation	%	35	JIS K 6251(#2 Die)/ASTM D412	A
Tear Resistance	KN/m	1	JIS K 6252(Angle)/ASTM D 624	A
Volume Resistivity	Mohms-m	1x10 ⁵	JIS K 6249/ASTM D 257	C
Breakdown Voltage	KV/mm	21	JIS K 6249/ASTM D 149	C
Withstand Voltage	KV/mm	15	JIS K 6249/ASTM D 149	C

Remark / Specimen A : 2.0mm Thickness. (200X-m)

Specimen B : 60mm Width x 120mm Length x 20mm Thickness.

Specimen C : 120mm Width x 120mm Length x 1.0mm Thickness. (100X-m)

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