



Fujipoly New Product Technical Information

NEW PRODUCT : **SARCON[®] XR-Um / XR-Um-AI**

Highly Thermal Conductive and Non-Flamable Siliocne Putty Sheets

1. Features:

Sarcon[®] XR-Um is the highest thermal conductive putty type silicone sheet. Putty nature greatly contributes to reduction of contact resistance and consequently to lowest thermal resistance, and it is customer friendly material due to its easy applying by printing.

Sarcon[®] XR-Um-AI has one surface with aluminum film, which enable to remove even after application (before operation) and there is no-pull-out effect.

- 1) Putty nature enables low contact thermal resistance
- 2) Low Molecular Siloxane content is very low
- 3) Has a flame retardancy of UL specification 94 V-0

2. Variety of Sarcon[®] XR-Um and XR-Um-AI products:

Description	Construction	Application Guidelines
Sarcon[®] ##X-Um (30X-Um, 50X-Um)	Silicone (Gel) compound	Thermal transfer from CPU and other heat-generating devices to heatsink
Sarcon[®] ##X-Um-AI (30X-Um-AI, 50X-Um-AI)	Silicocne (Gel) compound with Aluminum film (10 μ mT)	

* ## refers to a thickness of sheet. (unit: 1/100mm)

3. Typical Product Properties:

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

Item	XR-Um	XR-Um-AI
Thermal Conductivity (W/m·K) (ASTM D 5470)	17	
Thermal Resistance (°C·inch ² /watt) (ASTM D 5470)	0.2mmT	0.03
	0.3mmT	0.04
	0.4mmT	0.05
	0.5mmT	0.06
Flame retardancy (UL94)	V-0	(V-0) ^{*1}
Volume Resistivity (MΩ-m)	1x10 ⁵	(1x10 ⁵) ^{*2}

*1: V-0 equivalent

*2: Silicone material only except for Aluminum film

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

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

3-3. Durability (Reliability): (Typical Value)

Specimen: 20X-Um (15x15)

Specimen: 40X-Um (15x15)

Test Conditions	Initial	250 hrs	500 hrs	1,000 hrs	Test Conditions	Initial	250 hrs	500 hrs	1,000 hrs
+120°C Aging	0.031	0.026	0.029	0.032	+120°C Aging	0.045	0.046	0.047	0.047
+150°C Aging	0.031	0.040	0.040	0.040	+150°C Aging	0.045	0.048	0.054	0.057
+85°C 85%RH Aging	0.031	0.031	0.034	0.034	+85°C 85%RH Aging	0.045	0.043	0.044	0.046
-40°C⇄+125°C Heat Shock	0.031	0.028	0.029	0.030	-40°C⇄+125°C Heat Shock	0.045	0.045	0.044	0.048

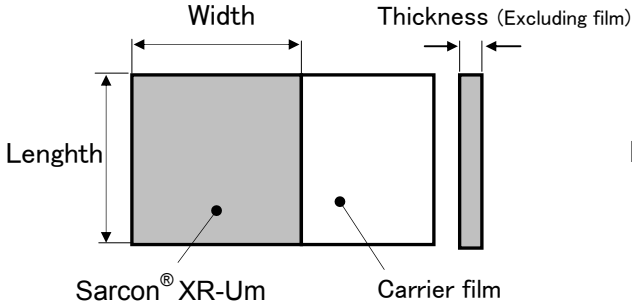
*Test Method for Thermal Resistance (inch²/watt): ASTM D 5470



4. Measurement and Handling Method:

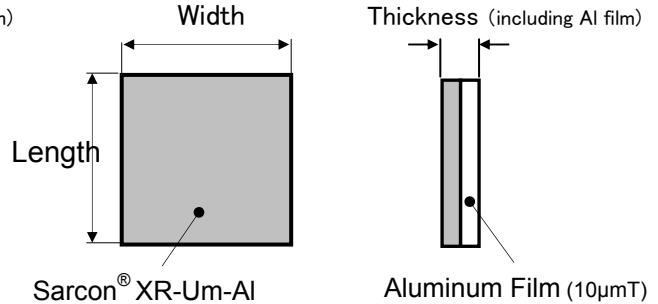
4-1. Composition

Sarcon® XR-Um



Item	Size	Tolerance
Width (mm)	10.0 ~ 50.0	±1.0
Length (mm)	10.0 ~ 50.0	±1.0
Thickness (mm)	20X-Um	0.22 ±0.04
	30X-Um	0.30 ±0.06
	40X-Um	0.40 ±0.08
	50X-Um	0.50 ±0.10

Sarcon® XR-Um-Al



Item	Size	Tolerance
Width	10.0 ~ 50.0	±1.0
Length	10.0 ~ 50.0	±1.0
Thickness (Excluding Al film) (mm)	20X-Um	0.22 ±0.04
	30X-Um	0.30 ±0.06
	40X-Um	0.40 ±0.08
	50X-Um	0.50 ±0.10

4-2. Sarcon® XR-Um Handling Method



Step-1 Peel the product with carrier film off from PET film



Step-2 Apply onto heatsink



Step-3 Roll twice on the film to attach to heatsink



Step-4 Peel off instantly the PET film to 180°direction

5. Others:

Cautions;

- Specification and information stated on this paper may change without notice.
- Data listed in this paper is TYPICAL data and no GUARANTEED data.

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