

## Highest Thermal Conductivity PUTTY TYPE

Highest Thermal Conductivity and Non-Flammable interface materials

SARCON® Highest Thermal Conductive Putty Type is the highest thermal conductive putty type silicone sheet. The material's putty nature greatly contributes to reduction of contact resistance and consequently to its low thermal resistance. It is a customer friendly material due to its easy application by printing.

SARCON® XR-v-AL , XR-Um-AL has one surface with aluminium film, which enables users to remove the carrier film after installation (before operation) with no-pull-out effect.

### Features

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

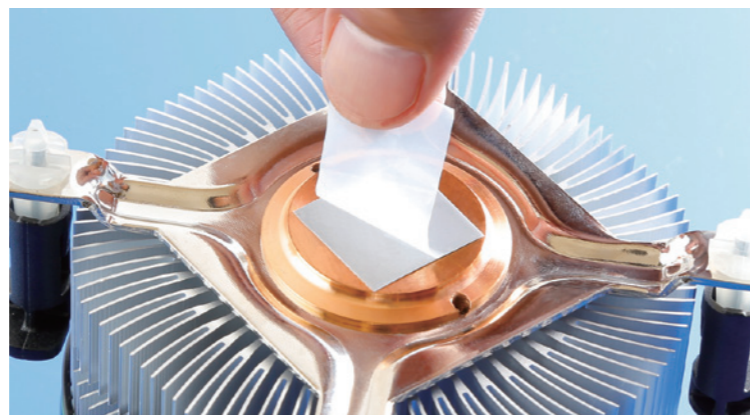
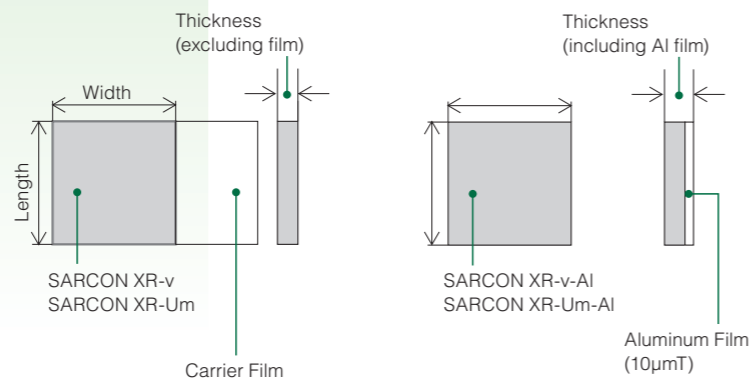
### Constructions

#### XR-v / XR-v-Al

Item	Size(mm)	Tolerance(mm)
Width	10.0 - 50.0	± 1.5
Length	10.0 - 50.0	± 1.0
Thickness	11X-v   0.11	± 0.03

#### XR-Um / XR-Um-Al

Item	Size(mm)	Tolerance(mm)
Width	10.0 - 50.0	± 1.5
Length	10.0 - 50.0	± 1.0
Thickness	20X-Um   0.22	± 0.04
	30X-Um   0.30	± 0.06
	40X-Um   0.40	± 0.08
	50X-Um   0.50	± 0.10



### Construction



### Typical Product Properties

Test Properties		Unit	XR-v	XR-Um	Test Method
Physical Properties	Construction	(See diagram above)	1) , 5)	1) , 5)	-
	Thickness	mm	0.11	0.22 to 0.5	ASTM D 734
	Specific Gravity	-	3.2	3.2	ASTM D 792
	Color	-	Apricot	Light Gray	Visual
Electrical Properties	Dielectric Constant	50Hz	7.64	9.49	ASTM D 150
		1kHz	7.3	8.19	
		1MHz	7.29	7.71	
	Dissipation Factor	50Hz	0.137	0.18	ASTM D 150
		1kHz	0.0145	0.0516	
		1MHz	0.0516	0.00474	
Thermal Properties	Thermal Conductivity unit : W/m-K	Guarded Heater	11	17	ASTM D 5470
		Hot Disk	6.6	11	ISO/CD 22007-2
	Recommended Operating Temp.	°C	-40 to +150	-40 to +150	-
		°F	-40 to +302	-40 to +302	
Flame Retardant*	-	V-0	V-0	UL94	

a) Thermal Conductivity : Measured by Guarded Heater Test method for reference. →See P.32  
: Measured by Hot Disk Test method according to ISO / CD22007-2. →See P.31

\* XR-v-AL , XR-Um-AL: V-0 equivalent.

### Thermal Resistance

unit : K-cm<sup>2</sup>/W (K-in<sup>2</sup>/W)

Pressure	XR-v		XR-Um					
	11X-v	11X-v-Al	20X-Um	30X-Um	50X-Um	20X-Um-Al	30X-Um-Al	50X-Um-Al
100kPa (14.5psi)	0.13 (0.02)	0.38 (0.06)	0.16 (0.02)	0.20 (0.03)	0.36 (0.06)	0.29 (0.04)	0.35 (0.05)	0.50 (0.08)
300kPa (43.5psi)	0.09 (0.01)	0.24 (0.04)	0.12 (0.02)	0.17 (0.03)	0.31 (0.05)	0.25 (0.04)	0.28 (0.04)	0.38 (0.06)
500kPa (72.5psi)	0.08 (0.01)	0.17 (0.03)	0.11 (0.02)	0.15 (0.02)	0.28 (0.04)	0.22 (0.03)	0.26 (0.04)	0.31 (0.05)

b) Test method: Fujipoly Test method, FTM-P3050 by TIM 1300 Tester which is ASTM D 5470 equivalent. →See P.32