

Arlon Thermabond® 51A42X012 0.012" (0.305 mm) Cured Silicone Rubber with Fiberglass Substrate

Category : Polymer , Thermoset , Silicone , Silicone Rubber , Silicone, Molded, Glass Fiber Filled

Material Notes:

Description: Thermabond® - Electrically insulating, thermally conductive, thermal interface material (TIM) Design/Construction: Liner:

Polyethylene Side 1: Cured Silicone Rubber Substrate: Style 7628 Fiberglass This data represents typical values for the production material.

The data should not be used to write, or in place of, material specifications Information provided by Arlon, Silicone Technologies Division

Order this product through the following link:

http://www.lookpolymers.com/polymer_Arlon-Thermabond-51A42X012-0012-0305-mm-Cured-Silicone-Rubber-with-Fiberglass-Substrate.php

Physical Properties	Metric	English	Comments
Density	2.80 g/cc	0.101 lb/in ³	Silicone Property; Arlon SQA-TMS-024
Thickness	63.5 microns	2.50 mil	Liner
	102 microns	4.00 mil	Side 1; Arlon SQA-TMS-003
	203 microns	8.00 mil	Substrate; Arlon SQA-TMS-003
	305 microns	12.0 mil	Overall; Arlon SQA-TMS-003

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	77	77	Silicone Property; ASTM D2240
Tensile Strength	4.72 MPa	685 psi	Silicone Property; ASTM D412
Tensile Strength, Yield	24.5 MPa	3550 psi	Arlon SQA-TMS-008
	@Strain <=1.00 %	@Strain <=1.00 %	
Elongation at Break	125 %	125 %	Silicone Property; ASTM D412
Poissons Ratio	0.50	0.50	Approximately, Silicone Property

Thermal Properties	Metric	English	Comments
CTE, linear	105 µm/m-°C	58.3 µin/in-°F	Silicone Property; ASTM E 831
	@Temperature 20.0 - 160 °C	@Temperature 68.0 - 320 °F	
Specific Heat Capacity	0.820 J/g-°C	0.196 BTU/lb-°F	Silicone Property; Arlon SQA-TMS-052
	@Temperature 100 °C	@Temperature 212 °F	
Thermal Conductivity	1.40 W/m-K	9.72 BTU-in/hr-ft ² -°F	Silicone Property; ASTM E 1530

Thermal Properties	Metric @Temperature 100 °C	English @Temperature 212 °F	Comments
	1.50 W/m-K	10.4 BTU-in/hr-ft²-°F	(Apparent), Product Property; ASTM D5470
	@Temperature 50.0 °C	@Temperature 122 °F	
Maximum Service Temperature, Air	204.0 °C	399.2 °F	
Minimum Service Temperature, Air	-100 °C	-148 °F	
Glass Transition Temp, Tg	-118 °C	-180 °F	ASTM D3418

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.00e+14 ohm-cm	1.00e+14 ohm-cm	ASTM D257
Dielectric Constant	6.91	6.91	Silicone Property; IPC TM 650 - 2.5.5.3
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	27.6 kV/mm	700 kV/in	ASTM D149
Dissipation Factor	0.0044	0.0044	Silicone Property; IPC TM 650 - 2.5.5.3
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Arc Resistance	193 sec	193 sec	ASTM D495-99

Processing Properties	Metric	English	Comments
Shelf Life	60.0 Month	60.0 Month	From date of manufacture
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Descriptive Properties	Value	Comments
Color	Gray	
	Red	Substrate
Total Product Weight (g/m2)	685	Arlon SQA-TMS-025

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China