

## Arlon Thermabond® 48A51X015 0.015" (0.381 mm) Uncured Silicone Rubber with Fiberglass Substrate

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

### Material Notes:

Description: Primerless Thermabond® Electrically insulating, thermally conductive, electronic adhesive. Bonds without primer. Design/Construction: Liner 1: Polyethylene Side 1: Uncured Silicone Rubber Substrate: Style 1080 Fiberglass Side 2: Uncured Silicone Rubber Liner 2: Polyethylene Product Use: Adhesive, thermally conductive Appearance: High viscosity gum (pink) of fiberglass fabric with yellow release liners 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-48A51X015-0015-0381-mm-Uncured-Silicone-Rubber-with-Fiberglass-Substrate.php](http://www.lookpolymers.com/polymer_Arlon-Thermabond-48A51X015-0015-0381-mm-Uncured-Silicone-Rubber-with-Fiberglass-Substrate.php)

Physical Properties	Metric	English	Comments
Density	2.80 g/cc	0.101 lb/in <sup>3</sup>	Silicone Property; Arlon SQA-TMS-024
Thickness	38.1 microns	1.50 mil	Liner 1
	38.1 microns	1.50 mil	Liner 2
	76.2 microns	3.00 mil	Substrate; Arlon SQA-TMS-003
	152 microns	6.00 mil	Side 1; Arlon SQA-TMS-003
	152 microns	6.00 mil	Side 2; Arlon SQA-TMS-003
	381 microns	15.0 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	Silicone Property; 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
Shear Modulus	0.000296 GPa	0.0430 ksi	ASTM D1002
	@Strain <=25.0 %	@Strain <=25.0 %	
Shear Strength	6.05 MPa	878 psi	Lap; ASTM 1002

Thermal Properties	Metric	English	Comments
CTE, linear	11.0 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	6.11 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	Silicone Property; ASTM E 831
	@Temperature 20.0 - 160 $^{\circ}\text{C}$	@Temperature 68.0 - 320 $^{\circ}\text{F}$	
Specific Heat Capacity	0.820 $\text{J}/\text{g}\cdot^{\circ}\text{C}$	0.196 $\text{BTU}/\text{lb}\cdot^{\circ}\text{F}$	Silicone Property; Arlon SQA-TMS-052
	@Temperature 100 $^{\circ}\text{C}$	@Temperature 212 $^{\circ}\text{F}$	
Thermal Conductivity	1.40 $\text{W}/\text{m}\cdot\text{K}$	9.72 $\text{BTU}\cdot\text{in}/\text{hr}\cdot\text{ft}^2\cdot^{\circ}\text{F}$	Silicone Property; ASTM E 1530
	@Temperature 100 $^{\circ}\text{C}$	@Temperature 212 $^{\circ}\text{F}$	
Maximum Service Temperature, Air	1.50 $\text{W}/\text{m}\cdot\text{K}$	10.4 $\text{BTU}\cdot\text{in}/\text{hr}\cdot\text{ft}^2\cdot^{\circ}\text{F}$	Product Property; Arlon SQA-TMS-054
	@Pressure 30.0 MPa, Temperature 50.0 $^{\circ}\text{C}$	@Pressure 4350 psi, Temperature 122 $^{\circ}\text{F}$	
Minimum Service Temperature, Air	95.6 $^{\circ}\text{C}$	204 $^{\circ}\text{F}$	
Glass Transition Temp, Tg	-73.3 $^{\circ}\text{C}$	-100 $^{\circ}\text{F}$	
Flammability, UL94	-118 $^{\circ}\text{C}$	-180 $^{\circ}\text{F}$	
	V-0	V-0	

Electrical Properties	Metric	English	Comments
Dielectric Constant	6.91	6.91	Silicon Property; IPC TM 650 - 2.5.5.3
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	34.7 $\text{kV}/\text{mm}$	882 $\text{kV}/\text{in}$	ASTM D149
Dissipation Factor	0.0044	0.0044	Silicon Property; IPC TM 650 - 2.5.5.3
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	

Processing Properties	Metric	English	Comments
Cure Time	15.0 min	0.250 hour	Recommended Cure Cycle
	@Temperature 121 $^{\circ}\text{C}$	@Temperature 250 $^{\circ}\text{F}$	
Shelf Life	6.00 Month	6.00 Month	From date of manufacture
	@Temperature 4.00 - 10.0 $^{\circ}\text{C}$	@Temperature 39.2 - 50.0 $^{\circ}\text{F}$	

Descriptive Properties	Value	Comments
Color	Gray	

Plasticity Descriptive Properties	2.3 mm Value	Arlon-SQA-TMS-005 Comments
Total Product Weight (g/m2)	550	Arlon SQA-TMS-025

## Contact Songhan Plastic Technology Co.,Ltd.

Website : [www.lookpolymers.com](http://www.lookpolymers.com)

Email : [sales@lookpolymers.com](mailto:sales@lookpolymers.com)

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

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