

Arlon Thermabond® 99A50X008 0.008" (0.203 mm) Uncured Silicone Rubber with PTFE Coated Fiberglass Carrier

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: FEPP
Product: Uncured Silicone Rubber Carrier: PTFE Coated Fiberglass
Product Advantages: Bond Reliability – Bonds securely regardless of substrate type, shape, or texture. Hot Spot Elimination – Thermal conductivity up to 3 W/mK to transport heat away from hot spots. Thermal-Mechanical Stress Decoupling – Low modulus and high shear strength prevent adhesive delamination. Low Temperature Cure Cycle – Thermabond® cure parameters can be as low as 100°C at 100 kPa, so surface mount components can be mounted on the PCB prior to bonding. Uniform Bond Line Thickness – Precision calendaring produces a uniform adhesive film. Proven Performance – Arlon Thermabond® adhesive products are the gold standard for critical, demanding electronic system applications.
Product Use: Thermally conductive adhesive
Appearance: Gray gum on brown and clear 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-99A50X008-0008-0203-mm-Uncured-Silicone-Rubber-with-PTFE-Coated-Fiberglass-Carrier.php

Physical Properties	Metric	English	Comments
Density	2.80 g/cc	0.101 lb/in ³	Silicone Property; Arlon SQA-TMS-024
Thickness	25.4 microns	1.00 mil	Liner
	76.2 microns	3.00 mil	Carrier
	203 microns	8.00 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	1.00 GPa	145 ksi	ASTM D1002
	@Strain <=25.0 %	@Strain <=25.0 %	
Shear Strength	3.45 MPa	500 psi	Lap Shear Strength; ASTM D1002

Thermal Properties	Metric	English	Comments
CTE, linear	111 $\mu\text{m}/\text{m}\cdot^{\circ}\text{C}$	61.7 $\mu\text{in}/\text{in}\cdot^{\circ}\text{F}$	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; ASTM E 1952
	@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	4.69 $\text{W}/\text{m}\cdot\text{K}$	32.5 $\text{BTU}\cdot\text{in}/\text{hr}\cdot\text{ft}^2\cdot^{\circ}\text{F}$	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	204.0 $^{\circ}\text{C}$	399.2 $^{\circ}\text{F}$	
Glass Transition Temp, Tg	-100 $^{\circ}\text{C}$	-148 $^{\circ}\text{F}$	
	-118 $^{\circ}\text{C}$	-180 $^{\circ}\text{F}$	Silicone Property; ASTM D3418

Electrical Properties	Metric	English	Comments
Dielectric Constant	6.9	6.9	D _k , Silicone Property; IPC TM 650-2.5.5.3
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	
Dielectric Strength	31.5 kV/mm	800 kV/in	ASTM D149
Dissipation Factor	0.0044	0.0044	D _f , Silicone 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
	@Pressure 0.101 - 0.345 MPa, Temperature 121.0 $^{\circ}\text{C}$	@Pressure 14.6 - 50.0 psi, Temperature 249.8 $^{\circ}\text{F}$	
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	2.3 mm	Arlon SQA-TMS-005

Descriptive Properties	Value	Comments
Total Product Weight (g/m2)	369	Adon SQA-TMS-025

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