

Solvay Specialty Polymers Amodel® AF-1133 V0 Polyphthalamide (PPA) Resin, 33% Glass Reinforced, Dry As Molded

Category : Polymer , Thermoplastic , Polyphthalamide (PPA) , Polyphthalamide (PPA), 30% Glass Fiber Reinforced

Material Notes:

AMODEL AF-1133 V0 resin in a 33% glass reinforced, flame retarded polyphthalamide (PPA) which exhibits a high deflection temperature, tensile strength, and flexural modulus. The material has good dimensional stability; therefore, typical humid environmental conditions result in only minor changes in the strength and stiffness. This grade of AMODEL resin can withstand the demanding vapor phase and infrared reflow soldering processes typically used in the electronics industry. It is ideally suited for most connectors and electrical devices requiring surface mount technology (SMT). The material offers easy processing using conventional equipment and methods. This product line was acquired by Solvay Advanced Polymers from BP Amoco in November 2001. MatWeb has an entry for this material conditioned at 50% RH.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Amodel-AF-1133-V0-Polyphthalamide-PPA-Resin-33-Glass-Reinforced-Dry-As-Molded-nbsp.php

Physical Properties	Metric	English	Comments
Density	1.71 g/cc	0.0618 lb/in ³	ASTM D792
Water Absorption	0.18 %	0.18 %	24 hrs. ASTM D570
Linear Mold Shrinkage	0.0020 cm/cm	0.0020 in/in	ASTM E831
Linear Mold Shrinkage, Transverse	0.0040 cm/cm	0.0040 in/in	ASTM E831

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	125	125	ASTM D785
Tensile Strength, Ultimate	179 MPa	26000 psi	ASTM D638
Elongation at Break	1.8 %	1.8 %	ASTM D638
Tensile Modulus	13.8 GPa	2000 ksi	ASTM D638
Flexural Yield Strength	257 MPa	37300 psi	ASTM D790
Flexural Modulus	13.1 GPa	1900 ksi	ASTM D790
Izod Impact, Notched	0.800 J/cm	1.50 ft-lb/in	ASTM D256
Izod Impact, Unnotched	4.60 J/cm	8.62 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
Melting Point	310 °C	590 °F	ASTM D3418
Deflection Temperature at 1.8 MPa	273 °C	523 °F	

Thermal Properties	Metric	English	ASTM D648 Comments
Flammability, UL94	V-0	V-0	
	@Thickness 1.60 mm	@Thickness 0.0630 in	
	V-0	V-0	
	@Thickness 1.60 mm	@Thickness 0.0630 in	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	3.00e+15 ohm-cm	3.00e+15 ohm-cm	ASTM D257
Surface Resistance	2.00e+15 ohm	2.00e+15 ohm	ASTM D257
Dielectric Constant	4.0	4.0	ASTM D150
	@Frequency 100 Hz	@Frequency 100 Hz	
Dielectric Strength	4.9	4.9	ASTM D150
	@Frequency 1e+6 Hz	@Frequency 1e+6 Hz	
Dissipation Factor	0.0080	0.0080	ASTM D150
Arc Resistance	>= 300 sec	>= 300 sec	UL 746A
Comparative Tracking Index	550 V	550 V	
Hot Wire Ignition, HWI	>= 150 sec	>= 150 sec	
High Amp Arc Ignition, HAI	74 arcs	74 arcs	
	@Thickness 0.800 mm	@Thickness 0.0315 in	
High Voltage Arc-Tracking Rate, HVTR	16.0 mm/min	0.630 in/min	

Processing Properties	Metric	English	Comments
Melt Temperature	321 - 343 °C	610 - 649 °F	Injection

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