

Solvay Specialty Polymers Amodel® HFFR-4133 Polyphthalamide (PPA) (Unverified Data**)

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

Material Notes:

Amodel HFFR-4133 is a 33% glass-reinforced, halogen- free, flame retardant polyphthalamide (PPA) resin which offers enhanced processing capabilities for electrical and electronic applications. This resin is rated V-0 by Underwriters Laboratories using the UL94 test and is hot-water moldable. It has high flow and a wide processing window and offers good surface appearance, especially for larger electrical components. This grade can withstand the demanding infrared reflow soldering process typically used in the electronics industry. It is well suited for connectors and other electrical devices requiring surface mount technology (SMT). - Black: HFFR-4133 BK 324 - Black: HFFR-4133 BK 318 - Natural: HFFR-4133 NT
Injection Notes: Injection Rate: 3 to 4 in/sec Holding Pressure: 50% of injection pressure
Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Amodel-HFFR-4133-Polyphthalamide-PPA-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.46 g/cc	0.0527 lb/in ³	ISO 1183/A
Filler Content	33 %	33 %	Glass Fiber Reinforcement
Water Absorption	0.28 % @Time 86400 sec	0.28 % @Time 24.0 hour	ASTM D570
Linear Mold Shrinkage, Flow	0.0032 cm/cm	0.0032 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.013 cm/cm	0.013 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	121	121	R-Scale; ASTM D785
Tensile Strength, Yield	145 - 160 MPa	21000 - 23200 psi	Higher values are for NT and BK324.; ISO 527-2
Elongation at Break	1.9 - 2.3 %	1.9 - 2.3 %	Higher values are for NT and BK324.; ISO 527-2
Tensile Modulus	12.0 GPa	1740 ksi	ISO 527-2
Flexural Strength	220 - 230 MPa	31900 - 33400 psi	Higher values are for NT and BK324.; ISO 178
Flexural Modulus	10.8 GPa	1570 ksi	ISO 178
Izod Impact, Notched (ISO)	7.00 - 8.00 kJ/m ²	3.33 - 3.81 ft-lb/in ²	Higher values are for NT and BK324.; ISO 180/1A
Izod Impact, Unnotched (ISO)	40.0 - 48.0 kJ/m ²	19.0 - 22.8 ft-lb/in ²	Higher values are for NT and BK324.; ISO 180/1U

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	300 °C	572 °F	Unannealed; ISO 75-2/Af
Flammability, UL94	V-0 @Thickness 0.800 mm	V-0 @Thickness 0.0315 in	UL 94

Electrical Properties	Metric	English	Comments
Volume Resistivity	1.30e+16 ohm-cm	1.30e+16 ohm-cm	Specimens conditioned for 96 hours at 95°F (35°C) and 90% RH; ASTM D257
Dielectric Constant	3.53 @Frequency 1.00e+6 Hz	3.53 @Frequency 1.00e+6 Hz	ASTM D150
	3.78 @Frequency 100 Hz	3.78 @Frequency 100 Hz	ASTM D150
Dielectric Strength	26.0 kV/mm @Thickness 1.60 mm	660 kV/in @Thickness 0.0630 in	ASTM D149
	30.0 kV/mm @Thickness 0.800 mm	762 kV/in @Thickness 0.0315 in	ASTM D149
Dissipation Factor	0.0050 @Frequency 100 Hz	0.0050 @Frequency 100 Hz	ASTM D150
	0.012 @Frequency 1.00e+6 Hz	0.012 @Frequency 1.00e+6 Hz	ASTM D150
Comparative Tracking Index	>= 600 V	>= 600 V	PLC 0; UL 746

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	300 °C	572 °F	
Front Barrel Temperature	325 °C	617 °F	
Melt Temperature	340 - 350 °C	644 - 662 °F	
Mold Temperature	90.0 - 110 °C	194 - 230 °F	
Drying Temperature	120 °C	248 °F	
Dry Time	4.00 hour	4.00 hour	
Moisture Content	0.030 - 0.060 %	0.030 - 0.060 %	

Processing Properties	Metric	English	Comments
Descriptive Properties	Value		Comments
Additive	Flame Retardant		
Appearance	Black		
	Natural Color		
Availability	Asia Pacific		
	Europe		
	North America		
Features	Fast Molding Cycle		
	Flame Retardant		
	Good Chemical Resistance		
	Good Creep Resistance		
	Good Dimensional Stability		
	Good Electrical Properties		
	Good Stiffness		
	Halogen Free		
	High Strength		
	Hot Water Moldability		
Forms	Pellets		
Generic	PPA		
Processing Method	Water-Heated Mold Injection Molding		
RoHS Compliance	RoHS Compliant		
Uses	Connectors		
	Electrical/Electronic Applications		

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