

Solvay Specialty Polymers Amodel® FC-1140 Polyphthalamide (PPA), 40% Glass Fiber

Category : Polymer , Thermoplastic , Polyphthalamide (PPA) , Polyphthalamide (PPA), 40% Glass Fiber Reinforced

Material Notes:

Amodel® FC-1140 is an FDA-approved, 40% glass fiber reinforced resin designed for high strength and stiffness. This combines with its excellent thermal properties, low water absorption and good hydrolytic stability to make it particularly suited for components used in food service and consumer applications such as coffee machines and ovens. Features: Chlorine Resistant; Good Chemical Resistance; Good Creep Resistance; Good Dimensional Stability; High Stiffness; High Strength; High Temperature Strength; Low Moisture Absorption. Uses: Appliances; Consumer Applications; Filters; Housings; Industrial Applications; Plumbing Parts; Pump Parts; Valves/Valve Parts. Injection Molding Notes: Amodel® compounds are shipped in moisture-resistant packages at moisture levels according to specifications. Sealed, undamaged bags should be preferably stored in a dry room at a maximum temperature of 50°C (122°F) and should be protected from possible damage. If only a portion of a package is used, the remaining material should be transferred into a sealable container. It is recommended that Amodel® resins be dried prior to molding. Additional Properties: Flexural Strain - ISO 178 (23°C): 2.50. Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Amodel-FC-1140-Polyphthalamide-PPA-40-Glass-Fiber.php

Physical Properties	Metric	English	Comments
Density	1.54 g/cc	0.0556 lb/in ³	ISO 1183
Filler Content	40 %	40 %	Glass Fiber
Linear Mold Shrinkage, Flow	0.0016 - 0.0018 cm/cm	0.0016 - 0.0018 in/in	
	@Thickness 1.00 mm	@Thickness 0.0394 in	
Linear Mold Shrinkage, Transverse	0.0021 - 0.0025 cm/cm	0.0021 - 0.0025 in/in	
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.0048 - 0.0054 cm/cm	0.0048 - 0.0054 in/in	ASTM D955
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.0050 - 0.0057 cm/cm	0.0050 - 0.0057 in/in	ASTM D955
	@Thickness 1.00 mm	@Thickness 0.0394 in	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	250 MPa	36300 psi	ISO 527-2
Elongation at Break	2.0 %	2.0 %	ISO 527-2
Tensile Modulus	15.4 GPa	2230 ksi	ISO 527-2
Flexural Strength	360 MPa	52200 psi	ISO 178

Elemental Modulus Mechanical Properties	14.7 GPa Metric	2130 kJ English	ISO 179 Comments
Charpy Impact Unnotched	7.50 J/cm ²	35.7 ft-lb/in ²	ISO 179
Charpy Impact, Notched	1.00 J/cm ²	4.76 ft-lb/in ²	ISO 179

Thermal Properties	Metric	English	Comments
Deflection Temperature at 1.8 MPa (264 psi)	297 Â°C	567 Â°F	Unannealed; Flatwise; ISO 75-2/A

Compliance Properties	Metric	English	Comments
FDA	Yes	Yes	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	315 - 330 Â°C	599 - 626 Â°F	
Middle Barrel Temperature	320 - 340 Â°C	608 - 644 Â°F	
Front Barrel Temperature	324 - 345 Â°C	615 - 653 Â°F	
Melt Temperature	340 - 360 Â°C	644 - 680 Â°F	
Mold Temperature	160 Â°C	320 Â°F	
Drying Temperature	120 Â°C @Time 14400 sec	248 Â°F @Time 4.00 hour	
Moisture Content	0.030 - 0.060 %	0.030 - 0.060 %	Suggested Max

Descriptive Properties	Value	Comments
Agency Ratings	EU 10/2011; FDA 21 CFR 176.170(c)	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	Latin America	
	North America	
Color	Black; Natural	
Form	Pellets	
Processing Technique	Injection Molding	

RoHS Compliance Descriptive Properties	RoHS Compliant Value	Comments
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