

Solvay Specialty Polymers Amodel® A-4122 HR WH 117 Polyphthalamide (PPA), 22% Glass Fiber

Category : Polymer , Thermoplastic , Polyphthalamide (PPA) , Polyphthalamide (PPA), 20% Glass Fiber Reinforced

Material Notes:

Amodel® A-4122 HR resin is a 22% glass reinforced polyphthalamide (PPA), designed to provide high crystallinity when molded in water-cooled molds. This material exhibits high heat resistance, high strength and stiffness over a broad temperature range, low moisture absorption, excellent chemical resistance, and excellent electrical properties. Its rapid crystallization rate and high flow can result in short cycles and therefore high molding productivity and lower part cost. Features: Fast Molding Cycle; Good Chemical Resistance; Good Color Stability; High Reflectivity; Low Moisture Absorption Uses: Automotive Applications; Automotive Electronics 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: Optical Reflectivity - ASTM E1331 > 90 % Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Amodel-A-4122-HR-WH-117-Polyphthalamide-PPA-22-Glass-Fiber.php

Physical Properties	Metric	English	Comments
Density	1.50 g/cc	0.0542 lb/in ³	ISO 1183
Filler Content	22 %	22 %	Glass Fiber
Water Absorption	0.24 % @Time 86400 sec	0.24 % @Time 24.0 hour	ISO 62
Linear Mold Shrinkage, Flow	0.0040 cm/cm	0.0040 in/in	
Linear Mold Shrinkage, Transverse	0.0060 cm/cm	0.0060 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	124	124	ASTM D785
Tensile Strength, Yield	125 MPa	18100 psi	ISO 527-2
Elongation at Break	1.5 %	1.5 %	ISO 527-2
Tensile Modulus	9.10 GPa	1320 ksi	ISO 527-2
Flexural Strength	171 MPa	24800 psi	ISO 178
Flexural Modulus	7.79 GPa	1130 ksi	ISO 178
Izod Impact, Notched	0.270 J/cm	0.506 ft-lb/in	ASTM D256

Mechanical Properties	Metric	English	Comments
Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	14.0 Âµm/m-Â°C	7.78 Âµin/in-Â°F	2
	@Temperature 150 - 250 Â°C	@Temperature 302 - 482 Â°F	
	31.0 Âµm/m-Â°C	17.2 Âµin/in-Â°F	2
	@Temperature 0.000 - 100 Â°C	@Temperature 32.0 - 212 Â°F	
CTE, linear, Transverse to Flow	74.0 Âµm/m-Â°C	41.1 Âµin/in-Â°F	TMA; ASTM E831
	@Temperature 0.000 - 100 Â°C	@Temperature 32.0 - 212 Â°F	
	160 Âµm/m-Â°C	88.9 Âµin/in-Â°F	TMA; ASTM E831
	@Temperature 100 - 250 Â°C	@Temperature 212 - 482 Â°F	
Melting Point	321 Â°C	610 Â°F	ISO 11357-3
Deflection Temperature at 0.46 MPa (66 psi)	318 Â°C	604 Â°F	HDT B; Unannealed; ISO 75-2/B
Processing Properties	Metric	English	Comments
Rear Barrel Temperature	304 - 318 Â°C	579 - 604 Â°F	
Front Barrel Temperature	316 - 329 Â°C	601 - 624 Â°F	
Melt Temperature	321 - 343 Â°C	610 - 649 Â°F	
Mold Temperature	135 Â°C	275 Â°F	
Drying Temperature	120 Â°C	248 Â°F	
	@Time 14400 sec	@Time 4.00 hour	
Moisture Content	<= 0.045 %	<= 0.045 %	
Descriptive Properties	Value	Comments	
Availability	Africa & Middle East		
	Asia Pacific		
	Europe		
	Latin America		
	North America		

Descriptive Properties	Value	Comments
Form	Pellets	
Processing Technique	Water-Heated Mold Injection Molding	
RoHS Compliance	RoHS Compliant	

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