

Solvay Specialty Polymers Amodel® A-4122 HR WH 117 Polyphthalamide (PPA) (Unverified Data**)

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. - White: A-4122 HR WH 117 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-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.50 g/cc	0.0542 lb/in ³	ISO 1183/A
Filler Content	22 %	22 %	Glass Fiber Reinforcement
Water Absorption	0.24 % @Time 86400 sec	0.24 % @Time 24.0 hour	ASTM D570
Linear Mold Shrinkage, Flow	0.0040 cm/cm	0.0040 in/in	ASTM D955
Linear Mold Shrinkage, Transverse	0.0060 cm/cm	0.0060 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	124	124	R-Scale; 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
Izod Impact, Notched (ISO)	2.50 kJ/m ²	1.19 ft-lb/in ²	ISO 180/1A

Thermal Properties	Metric	English	Comments
	14.0 µm/m-°C	7.78 µin/in-°F	

CTE, linear, Parallel to Flow Thermal Properties	Metric @Temperature 150 - 250 °C	English @Temperature 302 - 482 °F	TMA; ASTM E831 Comments
	31.0 µm/m-°C @Temperature 0.000 - 100 °C	17.2 µin/in-°F @Temperature 32.0 - 212 °F	TMA; ASTM E831
CTE, linear, Transverse to Flow	74.0 µm/m-°C @Temperature 0.000 - 100 °C	41.1 µin/in-°F @Temperature 32.0 - 212 °F	ASTM E831
	160 µm/m-°C @Temperature 150 - 250 °C	88.9 µin/in-°F @Temperature 302 - 482 °F	ASTM E831
Melting Point	321 °C	610 °F	ISO 11357-3
Deflection Temperature at 0.46 MPa (66 psi)	318 °C	604 °F	Unannealed; ISO 75-2/B

Optical Properties	Metric	English	Comments
Reflection Coefficient, Visible (0-1)	>= 0.90	>= 0.90	430 to 700 nm; ASTM E1331

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	304 - 318 °C	579 - 604 °F	
Front Barrel Temperature	316 - 329 °C	601 - 624 °F	
Melt Temperature	321 - 343 °C	610 - 649 °F	
Mold Temperature	135 °C	275 °F	
Drying Temperature	120 °C	248 °F	
Dry Time	4.00 hour	4.00 hour	
Moisture Content	0.045 %	0.045 %	

Descriptive Properties	Value	Comments
Appearance	White	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	

Descriptive Properties Features	Value Fast Molding Cycle	Comments
	Good Chemical Resistance	
	Good Color Stability	
	High Reflectivity	
	Low Moisture Absorption	
Forms	Pellets	
Generic	PPA	
Processing Method	Water-Heated Mold Injection Molding	
RoHS Compliance	RoHS Compliant	
Uses	Automotive Applications	
	Automotive Electronics	

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