

Amodel® A-4122 HR WH 117

Polyphthalamide
Solvay Specialty Polymers

Message:

HR AMODEL A- 4122 resin is 22% glass fiber reinforced polyphthalamide (PPA) to obtain high crystallinity during water-cooled mold molding. The material has high heat resistance, high strength, high rigidity, low moisture absorption, excellent chemical resistance and excellent electrical properties over a wide temperature range. Rapid crystallization and high fluidity can shorten the processing cycle, improve the molding efficiency and reduce part of the cost. -white: A- 4122 HR WH117

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 22% filler by weight		
Features	Low hygroscopicity		
	High reflectivity		
	Fast molding cycle		
	Good color stability		
	Good chemical resistance		
Uses	Automotive Electronics		
	Application in Automobile Field		
RoHS Compliance	RoHS compliance		
Appearance	White		
Forms	Particle		
Processing Method	Water temperature mold injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.50	g/cm ³	ISO 1183/A
Molding Shrinkage			ASTM D955
Flow	0.40	%	ASTM D955
Transverse flow	0.60	%	ASTM D955
Water Absorption (24 hr)	0.24	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	124		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	9100	MPa	ISO 527-2
Tensile Stress (Yield)	125	MPa	ISO 527-2
Tensile Strain (Break)	1.5	%	ISO 527-2
Flexural Modulus	7790	MPa	ISO 178
Flexural Stress	171	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact			
--	27	J/m	ASTM D256

--	2.5	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (0.45 MPa, Unannealed)	318	°C	ISO 75-2/B
Melting Temperature	321	°C	ISO 11357-3
Linear thermal expansion coefficient			ASTM E831
Flow: 0 to 100°C	3.1E-5	cm/cm/°C	ASTM E831
Flow: 150 to 250°C	1.4E-5	cm/cm/°C	ASTM E831
Lateral: 0 to 100°C	7.4E-5	cm/cm/°C	ASTM E831
Lateral: 150 to 250°C	1.6E-4	cm/cm/°C	ASTM E831
Additional Information	Nominal Value	Unit	Test Method
Light reflectivity ¹	> 90	%	ASTM E1331
Injection	Nominal Value	Unit	
Drying Temperature	120	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.045	%	
Rear Temperature	304 - 318	°C	
Front Temperature	316 - 329	°C	
Processing (Melt) Temp	321 - 343	°C	
Mold Temperature	135	°C	
Injection instructions			

Storage:

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 following the recommendations found in this datasheet and/or in the Amodel® processing guide.

NOTE

1. 430 - 700 nm

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