

Solvay Specialty Polymers Amodel® A-4122 LS WH678 Polyphthalamide (PPA), 22% Glass Fiber

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

Material Notes:

Amodel® A-4122 LS is a 22% glass fiber reinforced, light-stabilized, high-reflectivity white grade of Amodel polyphthalamide (PPA). It is designed to provide high crystallinity when molded in water-cooled molds. This resin exhibits high heat resistance, high strength and stiffness over a broad temperature range, low moisture absorption, excellent chemical resistance and excellent electrical properties.

Features: Fast Molding Cycle; Good Chemical Resistance; Good Color Stability; High Reflectivity; High Stiffness; Light Stabilized; Low

Moisture AbsorptionUses: Automotive Applications; Automotive ElectronicsInjection 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 (460 nm): > 90 %; Optical Reflectivity - ASTM E1331 (540 nm): > 90 %; Optical Reflectivity - ASTM E1331 (615 nm): > 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-LS-WH678-Polyphthalamide-PPA-22-Glass-Fiber.php

Physical Properties	Metric	English	Comments
Density	1.59 g/cc	0.0574 lb/in ³	ISO 1183
Filler Content	22 %	22 %	Glass Fiber
Water Absorption	0.19 % @Time 86400 sec	0.19 % @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	104 MPa	15100 psi	ASTM D638
Elongation at Break	1.2 %	1.2 %	ASTM D638
Tensile Modulus	9.10 GPa	1320 ksi	ASTM D638
Flexural Strength	165 MPa	23900 psi	ASTM D790
Flexural Modulus	8.10 GPa	1170 ksi	ASTM D790
Izod Impact, Notched	0.180 J/cm	0.337 ft-lb/in	ASTM D256

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	19.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	10.6 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	2
	@Temperature 150 - 250 $\text{Å}^\circ\text{C}$	@Temperature 302 - 482 $\text{Å}^\circ\text{F}$	
	25.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	13.9 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	2
	@Temperature 0.000 - 100 $\text{Å}^\circ\text{C}$	@Temperature 32.0 - 212 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	96.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	53.3 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E228
	@Temperature 0.000 - 100 $\text{Å}^\circ\text{C}$	@Temperature 32.0 - 212 $\text{Å}^\circ\text{F}$	
	150 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	83.3 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	ASTM E228
	@Temperature 100 - 250 $\text{Å}^\circ\text{C}$	@Temperature 212 - 482 $\text{Å}^\circ\text{F}$	
Melting Point	323 $\text{Å}^\circ\text{C}$	613 $\text{Å}^\circ\text{F}$	ASTM D3418
Deflection Temperature at 0.46 MPa (66 psi)	290 $\text{Å}^\circ\text{C}$	554 $\text{Å}^\circ\text{F}$	Unannealed; ASTM D648

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	318 - 324 $\text{Å}^\circ\text{C}$	604 - 615 $\text{Å}^\circ\text{F}$	
Middle Barrel Temperature	318 - 324 $\text{Å}^\circ\text{C}$	604 - 615 $\text{Å}^\circ\text{F}$	
Front Barrel Temperature	327 - 332 $\text{Å}^\circ\text{C}$	621 - 630 $\text{Å}^\circ\text{F}$	
Melt Temperature	329 - 343 $\text{Å}^\circ\text{C}$	624 - 649 $\text{Å}^\circ\text{F}$	
Mold Temperature	65.0 - 93.0 $\text{Å}^\circ\text{C}$	149 - 199 $\text{Å}^\circ\text{F}$	
Drying Temperature	120 $\text{Å}^\circ\text{C}$	248 $\text{Å}^\circ\text{F}$	
	@Time 14400 sec	@Time 4.00 hour	
Moisture Content	0.030 - 0.060 %	0.030 - 0.060 %	Suggested Max

Descriptive Properties	Value	Comments
Additive	UV Stabilizer	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	Latin America	

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

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