

Solvay Specialty Polymers Amodel® A-4422 LS WH118 Polyphthalamide (PPA), 22% Mineral

Category : Polymer , Thermoplastic , Polyphthalamide (PPA)

Material Notes:

Amodel® A-4422 LS resin is a 22% reinforced, light-stabilized, high-reflectivity white grade of polyphthalamide (PPA). The material 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 Absorption. Uses: Automotive Applications; Automotive Electronics; LEDs. 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 %; Optical Reflectivity - ASTM E1331 > 90 %; 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-4422-LS-WH118-Polyphthalamide-PPA-22-Mineral.php

Physical Properties	Metric	English	Comments
Density	1.60 g/cc	0.0578 lb/in ³	ISO 1183
Filler Content	22 %	22 %	Mineral
Water Absorption	0.20 % @Time 86400 sec	0.20 % @Time 24.0 hour	ISO 62
Linear Mold Shrinkage, Flow	0.0050 cm/cm	0.0050 in/in	
Linear Mold Shrinkage, Transverse	0.0060 cm/cm	0.0060 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength	102 MPa	14800 psi	ASTM D638
Elongation at Break	1.3 %	1.3 %	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 (ISO)	2.90 kJ/m ²	1.38 ft-lb/in ²	Type 1, Notch A; ISO 180

Thermal Properties	Metric	English	Comments
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Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	@Temperature 150 - 200 Å°C	@Temperature 302 - 392 Å°F	4
	31.0 Åµm/m-Å°C	17.2 Åµin/in-Å°F	4
	@Temperature 200 - 250 Å°C	@Temperature 392 - 482 Å°F	4
	31.0 Åµm/m-Å°C	17.2 Åµin/in-Å°F	4
	@Temperature 50.0 - 100 Å°C	@Temperature 122 - 212 Å°F	4
CTE, linear, Transverse to Flow	38.0 Åµm/m-Å°C	21.1 Åµin/in-Å°F	4
	@Temperature 100 - 150 Å°C	@Temperature 212 - 302 Å°F	4
	63.0 Åµm/m-Å°C	35.0 Åµin/in-Å°F	TMA; ASTM E831
	@Temperature 50.0 - 100 Å°C	@Temperature 122 - 212 Å°F	TMA; ASTM E831
	100 Åµm/m-Å°C	55.6 Åµin/in-Å°F	TMA; ASTM E831
Melting Point	@Temperature 100 - 150 Å°C	@Temperature 212 - 302 Å°F	TMA; ASTM E831
	130 Åµm/m-Å°C	72.2 Åµin/in-Å°F	TMA; ASTM E831
	@Temperature 150 - 200 Å°C	@Temperature 302 - 392 Å°F	TMA; ASTM E831
	150 Åµm/m-Å°C	83.3 Åµin/in-Å°F	TMA; ASTM E831
	@Temperature 200 - 250 Å°C	@Temperature 392 - 482 Å°F	TMA; ASTM E831
Melting Point	324 Å°C	615 Å°F	ISO 11357-3
Deflection Temperature at 0.46 MPa (66 psi)	306 Å°C	583 Å°F	HDT B; Unannealed; ISO 75-2/B

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	318 - 324 Å°C	604 - 615 Å°F	
Front Barrel Temperature	327 - 332 Å°C	621 - 630 Å°F	
Melt Temperature	329 - 343 Å°C	624 - 649 Å°F	
Mold Temperature	65.6 - 93.3 Å°C	150 - 200 Å°F	
Drying Temperature	120 Å°C	248 Å°F	
	@Time 14400 sec	@Time 4.00 hour	
Moisture Content	<= 0.045 %	<= 0.045 %	

Processing Properties	Metric	English	Comments
Descriptive Properties		Value	Comments
Availability		Africa & Middle East	
		Asia Pacific	
		Europe	
		Latin America	
		North America	
Color		White	
Form		Pellets	
Processing Technique		Injection Molding	
RoHS Compliance		RoHS Compliant	

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