

Solvay Specialty Polymers Amodel® A-4422 LS WH118 Polyphthalamide (PPA) (Unverified Data**)

Category : Polymer , Thermoplastic , Polyphthalamide (PPA) , Polyphthalamide (PPA), Mineral Filled

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. Its rapid crystallization rate and high flow characteristics can result in shorter cycles, thereby enhancing molding productivity and lowering costs. - White: A-4422 LS WH118
Injection Notes: Injection Pressure: 3 to 4 in/sec
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-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.60 g/cc	0.0578 lb/in ³	ISO 1183/A
Filler Content	22 %	22 %	Mineral Filler
Water Absorption	0.20 %	0.20 %	ASTM D570
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.0050 cm/cm	0.0050 in/in	ASTM D955
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	ISO 180/1A

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	27.0 µm/m-°C	15.0 µin/in-°F	TMA; ASTM E831
	@Temperature 150 - 200 °C	@Temperature 302 - 392 °F	
	31.0 µm/m-°C	17.2 µin/in-°F	

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

Optical Properties	Metric	English	Comments
Reflection Coefficient, Visible (0-1)	>= 0.90	>= 0.90	460 nm; ASTM E1331
	>= 0.90	>= 0.90	540 nm; ASTM E1331
	>= 0.90	>= 0.90	615 nm; ASTM E1331

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	318 - 324 °C	604 - 615 °F	
Front Barrel Temperature	327 - 332 °C	621 - 630 °F	
Melt Temperature	329 - 343 °C	624 - 649 °F	
Mold Temperature	65.6 - 93.3 °C	150 - 200 °F	
Drying Temperature	120 °C	248 °F	

Processing Properties	Metric	English	Comments
Moisture Content	0.045 %	0.045 %	

Descriptive Properties	Value	Comments
Appearance	White	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
Features	Fast Molding Cycle	
	Good Chemical Resistance	
	Good Color Stability	
	High Reflectivity	
	High Stiffness	
	Light Stabilized	
	Low Moisture Absorption	
Forms	Pellets	
Generic	PPA	
Processing Method	Injection Molding	
RoHS Compliance	RoHS Compliant	
Uses	Automotive Applications	
	Automotive Electronics	
	LEDs	

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