

## Solvay Specialty Polymers Amodel® A-1422 LS WH 171 Polyphthalamide (PPA) (discontinued \*\*)

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

### Material Notes:

Amodel A-1422 LS is a light-stabilized, high-reflectivity, 22%-reinforced white polyphthalamide (PPA) that exhibits high heat resistance, high strength and stiffness over a broad temperature range, low moisture absorption, excellent chemical resistance, and excellent electrical properties. - White: A-1422 LS WH 171  
 Injection Notes: A general purpose screw is recommended, with minimum back pressure.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Solvay-Specialty-Polymers-Amodel-A-1422-LS-WH-171-Polyphthalamide-PPA-nbspdiscontinued.php](http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Amodel-A-1422-LS-WH-171-Polyphthalamide-PPA-nbspdiscontinued.php)

Physical Properties	Metric	English	Comments
Density	1.61 g/cc	0.0582 lb/in <sup>3</sup>	ISO 1183/A
Filler Content	22 %	22 %	Mineral
Water Absorption	0.12 % @Time 86400 sec	0.12 % @Time 24.0 hour	ISO 62
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	ISO 294-4
Linear Mold Shrinkage, Transverse	0.0040 cm/cm	0.0040 in/in	ISO 294-4

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell R	125	125	ASTM D785
Tensile Strength at Break	105 MPa	15200 psi	ISO 527-2
Elongation at Break	1.3 %	1.3 %	ISO 527-2
Tensile Modulus	9.10 GPa	1320 ksi	ISO 527-2
Flexural Strength	160 MPa	23200 psi	ISO 178
Flexural Modulus	7.10 GPa	1030 ksi	ISO 178
Poissons Ratio	0.41	0.41	ASTM E132
Shear Modulus	3.23 GPa	468 ksi	Calculated
Izod Impact, Notched (ISO)	3.00 kJ/m <sup>2</sup>	1.43 ft-lb/in <sup>2</sup>	ISO 180/1A

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	30.0 µm/m-°C @Temperature 50.0 -	16.7 µin/in-°F @Temperature 122 -	TMA; ASTM E831

Thermal Properties	100 °C Metric	212 °F English	Comments
	30.0 µm/m-°C	16.7 µin/in-°F	
	@Temperature 100 - 150 °C	@Temperature 212 - 302 °F	TMA; ASTM E831
	39.0 µm/m-°C	21.7 µin/in-°F	
	@Temperature 150 - 200 °C	@Temperature 302 - 392 °F	TMA; ASTM E831
	43.0 µm/m-°C	23.9 µin/in-°F	
	@Temperature 200 - 250 °C	@Temperature 392 - 482 °F	TMA; ASTM E831
CTE, linear, Transverse to Flow	56.0 µm/m-°C	31.1 µin/in-°F	
	@Temperature 50.0 - 100 °C	@Temperature 122 - 212 °F	TMA; ASTM E831
	80.0 µm/m-°C	44.4 µin/in-°F	
	@Temperature 100 - 150 °C	@Temperature 212 - 302 °F	TMA; ASTM E831
	140 µm/m-°C	77.8 µin/in-°F	
	@Temperature 150 - 200 °C	@Temperature 302 - 392 °F	TMA; ASTM E831
	150 µm/m-°C	83.3 µin/in-°F	
	@Temperature 200 - 250 °C	@Temperature 392 - 482 °F	TMA; ASTM E831
Melting Point	325 °C	617 °F	ISO 11357-3
Deflection Temperature at 0.46 MPa (66 psi)	280 °C	536 °F	Annealed; ISO 75-2/B
Deflection Temperature at 1.8 MPa (264 psi)	210 °C	410 °F	Annealed; ISO 75-2/A

Optical Properties	Metric	English	Comments
Reflection Coefficient, Visible (0-1)	>= 0.90	>= 0.90	at 460 nm; ASTM E1331
	>= 0.90	>= 0.90	at 540 nm; ASTM E1331
	>= 0.90	>= 0.90	at 620 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 Processing Properties	321 - 343 °C Metric	610 - 649 °F English	Comments
Mold Temperature	135 °C	275 °F	
Drying Temperature	120 °C @Time 14400 sec	248 °F @Time 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	
Features	Good Chemical Resistance	
	Good Color Stability	
	High Reflectivity	
	Light Stabilized	
	Low Moisture Absorption	
Forms	Pellets	
Processing Method	Injection Molding	
RoHS Compliance	RoHS Compliant	
Uses	LEDs	

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