

Amodel® A-8422 LS WH159

Polyphthalamide
Solvay Specialty Polymers

Message:

Amodel® A-8422 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-8422 LS WH159

General Information			
UL YellowCard	E95746-100951622	E161096-101007345	
Filler / Reinforcement	Mineral filler, 22% filler by weight		
Features	Low hygroscopicity		
	High reflectivity		
	Light stabilization		
	Good color stability		
	Good chemical resistance		
Uses	LEDs		
RoHS Compliance	Contact manufacturer		
Appearance	White		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.68	g/cm ³	ISO 1183/A
Mold Shrinkage			
Vertical flow direction	1.0	%	
Flow direction	0.55	%	
Tensile fracture strain	0.95	%	ASTM D638
Light reflectivity			ASTM E1331
460 nm	> 90	%	ASTM E1331
540 nm	> 90	%	ASTM E1331
615 nm	> 90	%	ASTM E1331
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
--	11000	MPa	ASTM D638
--	10900	MPa	ISO 527-2
Tensile Strength			
--	95.1	MPa	ASTM D638
--	102	MPa	ISO 527-2
Tensile Strain (Break)	1.1	%	ISO 527-2
Flexural Modulus			

--	10200	MPa	ASTM D790
--	9930	MPa	ISO 178
Flexural Strength			
--	168	MPa	ASTM D790
--	145	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact	2.7	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (0.45 MPa, Annealed)	280	°C	ISO 75-2/B
Melting Temperature	327	°C	ISO 11357-3
Linear thermal expansion coefficient			ASTM E831
Flow: 50 to 100°C	2.6E-5	cm/cm/°C	ASTM E831
Flow: 100 to 150°C	2.4E-5	cm/cm/°C	ASTM E831
Flow: 150 to 200°C	2.1E-5	cm/cm/°C	ASTM E831
Flow: 200 to 250°C	2.7E-5	cm/cm/°C	ASTM E831
Horizontal: 50 to 100°C	5.1E-5	cm/cm/°C	ASTM E831
Horizontal: 100 to 150°C	7.3E-5	cm/cm/°C	ASTM E831
Horizontal: 150 to 200°C	1.1E-4	cm/cm/°C	ASTM E831
Horizontal: 200 to 250°C	1.3E-4	cm/cm/°C	ASTM E831
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			

A general purpose screw is recommended, with minimum back pressure.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.

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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