

Solvay Specialty Polymers Amodel® AT-1001L Polyphthalamide (PPA)

Category : Polymer , Thermoplastic , Polyphthalamide (PPA)

Material Notes:

Amodel® AT-1001L is an unreinforced, impact modified polyphthalamide (PPA) resin that exhibits exceptional impact strength at temperatures ranging from room temperature to as low as -40°F (-40°C), which suggests possible applications in ski boots and hockey skates. Features: Ductile; Good Chemical Resistance; Good Wear Resistance; Hot Water Moldability; Impact Modified; Low Temperature Impact Resistance; Low Warp; Lubricated. Uses: Automotive Applications; Automotive Electronics; General Purpose; Housings; Industrial Applications; Industrial Parts; Machine/Mechanical Parts; Metal Replacement; Oil/Gas Applications. 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. Automotive Specifications ASTM D5336 PPA0110A01080 Color: NT Natural. Information provided by Solvay Specialty Polymers.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Solvay-Specialty-Polymers-Amodel-AT-1001L-Polyphthalamide-PPA.php

Physical Properties	Metric	English	Comments
Density	1.11 g/cc	0.0401 lb/in ³	ISO 1183
Water Absorption	0.75 %	0.75 %	ISO 62
	@Time 86400 sec	@Time 24.0 hour	
Linear Mold Shrinkage, Flow	0.017 - 0.022 cm/cm	0.017 - 0.022 in/in	
Linear Mold Shrinkage, Transverse	0.019 - 0.021 cm/cm	0.019 - 0.021 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	62.1 MPa	9010 psi	ASTM D638
Elongation at Break	30 %	30 %	ASTM D638
Elongation at Yield	6.0 %	6.0 %	ASTM D638
Tensile Modulus	1.90 GPa	276 ksi	ASTM D638
Flexural Strength	96.5 MPa	14000 psi	ASTM D790
Flexural Modulus	2.21 GPa	321 ksi	ASTM D790
Poissons Ratio	0.35	0.35	ASTM E132
Izod Impact, Notched	7.50 J/cm	14.1 ft-lb/in	ASTM D256
	@Temperature -40.0 °C	@Temperature -40.0 °F	

Mechanical Properties	Metric <small>kg/cm</small>	English <small>lb/in</small>	Comments
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	ASTM D256

Thermal Properties	Metric	English	Comments
Melting Point	310 Â°C	590 Â°F	DSC
Deflection Temperature at 1.8 MPa (264 psi)	120 Â°C @Thickness 3.20 mm	248 Â°F @Thickness 0.126 in	Annealed; ASTM D648

Processing Properties	Metric	English	Comments
Processing Temperature	79.4 Â°C	175 Â°F	Hopper
Rear Barrel Temperature	304 - 318 Â°C	579 - 604 Â°F	
Front Barrel Temperature	316 - 329 Â°C	601 - 624 Â°F	
Melt Temperature	321 - 343 Â°C	610 - 649 Â°F	
Mold Temperature	65.6 - 110 Â°C	150 - 230 Â°F	
Drying Temperature	110 Â°C @Time 14400 sec	230 Â°F @Time 4.00 hour	
Moisture Content	<= 0.045 %	<= 0.045 %	

Descriptive Properties	Value	Comments
Additive	Impact Modifier	
	Lubricant	
	Mold Release	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	Latin America	
	North America	
Color	Natural	
Form	Pellets	
Processing Technique	Injection Molding; Water-Heated Mold Injection Molding	

Descriptive Properties

Value

Comments

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