

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

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. In addition, its chemical and wear resistance, combined with good mechanical properties, make Amodel AT-1001L resin a prime candidate for applications such as anti-friction and wear resistant components, chemical, oil field, automotive and safety equipment. - Natural: AT-1001 L NT
Additional Information: Penetration Impact, ASTM D3763, 73°F, Maximum Load: 1100 lbs Penetration Impact, ASTM D3763, 73°F, Total Energy Absorbed: 40 ft-lbs Penetration Impact, ASTM D3763, 73°F, Energy to Maximum Load: 30 ft-lbs Penetration Impact, ASTM D3763, -10°F, Total Energy Absorbed: 40 ft-lbs Penetration Impact, ASTM D3763, -10°F, Maximum Load: 1260 lbs Penetration Impact, ASTM D3763, -10°F, Energy to Maximum Load: 30 ft-lbs
Data is presented for dry polymer. 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-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.11 g/cc	0.0401 lb/in ³	ISO 1183/A
Water Absorption	0.75 % @Time 86400 sec	0.75 % @Time 24.0 hour	ASTM D570
Linear Mold Shrinkage, Flow	0.017 - 0.019 cm/cm	0.017 - 0.019 in/in	ASTM D955
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
Shear Modulus	0.704 GPa	102 ksi	Calculated
Izod Impact, Notched	7.50 J/cm	14.1 ft-lb/in	ASTM D256

Mechanical Properties	@Temperature -40.0 °C Metric	@Temperature -40.0 °F English	Comments
	11.0 J/cm	20.6 ft-lb/in	ASTM D256
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
Melting Point	310 °C	590 °F	
Deflection Temperature at 1.8 MPa (264 psi)	120 °C @Thickness 3.18 mm	248 °F @Thickness 0.125 in	Annealed; ASTM D648

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

Descriptive Properties	Value	Comments
Additive	Impact Modifier	
	Lubricant	
	Mold Release	
Appearance	Natural Color	
Automotive Specifications	ASTM D5336 PPA0110A01080 Color: NT Natural	
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	

Features Descriptive Properties	Ductile Value	Comments
	Good Chemical Resistance	
	Good Wear Resistance	
	Hot Water Moldability	
	Impact Modified	
	Low Temperature Impact Resistance	
	Low Warpage	
	Lubricated	
Forms	Pellets	
Generic	PPA	
Processing Method	Injection Molding	
	Water-Heated Mold Injection Molding	
Uses	Automotive Applications	
	Automotive Electronics	
	General Purpose	
	Housings	
	Industrial Applications	
	Industrial Parts	
	Machine/Mechanical Parts	
	Metal Replacement	
	Oil/Gas Applications	

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