

Solvay Specialty Polymers Amodel® AT-1116 HS Polyphthalamide (PPA), 16% Glass Fiber (Dry)

Category : Polymer , Thermoplastic , Polyphthalamide (PPA) , Polyphthalamide (PPA), 20% Glass Fiber Reinforced

Material Notes:

Amodel® AT-1116 HS polyphthalamide (PPA) is a toughened, heat stabilized 16% glass reinforced resin, designed as a cost effective solution for applications requiring stiffness, good dimensional stability, chemical resistance and ductility. This resin has a high heat deflection temperature and a high flexural modulus, with greater tensile elongation than untoughened glass reinforced PPA. Features: Good Chemical Resistance; Good Dimensional Stability; Heat Stabilized; High Heat Resistance; Impact Modified Uses: Automotive Applications; Automotive Electronics; Automotive Under the Hood; Bearings; Bobbins; Connectors; General Purpose; Industrial Applications; Industrial Parts; Machine/Mechanical Parts; Metal Replacement 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 D4000 PPA0111 G17 KD124 KN055 PN046 YI238 LD002 Color: BK 324 Black; ASTM D4000 PPA0111 G17 KD124 KN055 PN046 YI238 LD002 Color: NT Natural; ASTM D6779 PA123G15 YI220; GM GMN6828 Color: BK 324 Black; GM GMN6828 Color: NT Natural; GM GMP.PPA.009 Color: BK 324 Black; GM GMP.PPA.009 Color: NT Natural; GM GMW15702-021991 Color: BK 324 Black; GM GMW15702-021991 Color: NT Natural; GM GMW16359P-PPA-GF15 Color: BK 324 Black; GM GMW16359P-PPA-GF15 Color: NT Natural; ISO 1874-PA 6T/6I/66-HI, MH, 12-060, GF16; YAZAKI YPES-25-02-305 Color: BK 324 Black; YAZAKI YPES-25-02-305 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-1116-HS-Polyphthalamide-PPA-16-Glass-Fiber-Dry.php

Physical Properties	Metric	English	Comments
Density	1.28 g/cc	0.0462 lb/in ³	ISO 1183
Filler Content	16 %	16 %	Glass Fiber
Water Absorption	0.20 % @Time 86400 sec	0.20 % @Time 24.0 hour	ISO 62
Linear Mold Shrinkage, Flow	0.0060 cm/cm	0.0060 in/in	
Linear Mold Shrinkage, Transverse	0.0060 cm/cm	0.0060 in/in	ASTM D955

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	65.5 MPa @Temperature 100 Å°C	9500 psi @Temperature 212 Å°F	2; ISO 527-2
	160 MPa @Temperature 23.0 Å°C	23200 psi @Temperature 73.4 Å°F	2; ISO 527-2

Mechanical Properties	Metric	English	Comments
Elongation at Break	3.8 %	3.8 %	ASTM D638
	3.7 %	3.7 %	ISO 527-2
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
	4.2 %	4.2 %	ISO 527-2
	@Temperature 100 Â°C	@Temperature 212 Â°F	
Tensile Modulus	6.48 GPa	940 ksi	ASTM D638
	6.69 GPa	970 ksi	2; ISO 527-2
	@Temperature 100 Â°C	@Temperature 212 Â°F	
	6.89 GPa	999 ksi	2; ISO 527-2
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Flexural Strength	226 MPa	32800 psi	ASTM D790
	141 MPa	20500 psi	2; ISO 178
	@Temperature 100 Â°C	@Temperature 212 Â°F	
	197 MPa	28600 psi	2; ISO 178
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Flexural Modulus	6.00 GPa	870 ksi	ASTM D790
	4.96 GPa	719 ksi	ISO 178
	@Temperature 100 Â°C	@Temperature 212 Â°F	
	6.69 GPa	970 ksi	ISO 178
	@Temperature 23.0 Â°C	@Temperature 73.4 Â°F	
Compressive Strength	124 MPa	18000 psi	ASTM D695
Shear Strength	69.6 MPa	10100 psi	ASTM D732
Izod Impact, Notched	0.960 J/cm	1.80 ft-lb/in	ASTM D256
Izod Impact, Unnotched	9.60 J/cm	18.0 ft-lb/in	ASTM D256
Izod Impact, Notched (ISO)	8.00 kJ/mÂ²	3.81 ft-lb/inÂ²	Type 1, Notch A; ISO 180
Izod Impact, Unnotched (ISO)	53.0 kJ/mÂ²	25.2 ft-lb/inÂ²	Type 1; ISO 180
Charpy Impact Unnotched	8.60 J/cmÂ²	40.9 ft-lb/inÂ²	Type 1, Edgewise; ISO 179

Mechanical Properties	Metric	English	Comments
Dart Drop, Total Energy	10.0 J	7.38 ft-lb	Instrumented; ASTM D3763

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	16.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	8.89 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	2
	@Temperature 100 - 200 $\text{Å}^\circ\text{C}$	@Temperature 212 - 392 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	22.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	12.2 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	2
	@Temperature 0.000 - 100 $\text{Å}^\circ\text{C}$	@Temperature 32.0 - 212 $\text{Å}^\circ\text{F}$	
CTE, linear, Transverse to Flow	75.0 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	41.7 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	TMA; ASTM E831
	@Temperature 0.000 - 100 $\text{Å}^\circ\text{C}$	@Temperature 32.0 - 212 $\text{Å}^\circ\text{F}$	
Melting Point	120 $\mu\text{m}/\text{m}\cdot\text{Å}^\circ\text{C}$	66.7 $\mu\text{in}/\text{in}\cdot\text{Å}^\circ\text{F}$	TMA; ASTM E831
	@Temperature 100 - 200 $\text{Å}^\circ\text{C}$	@Temperature 212 - 392 $\text{Å}^\circ\text{F}$	
Melting Point	310 $\text{Å}^\circ\text{C}$	590 $\text{Å}^\circ\text{F}$	ASTM D3418
Deflection Temperature at 0.46 MPa (66 psi)	268 $\text{Å}^\circ\text{C}$	514 $\text{Å}^\circ\text{F}$	Annealed; ASTM D648
Deflection Temperature at 1.8 MPa (264 psi)	254 $\text{Å}^\circ\text{C}$	489 $\text{Å}^\circ\text{F}$	Annealed; ASTM D648
	258 $\text{Å}^\circ\text{C}$	496 $\text{Å}^\circ\text{F}$	Unannealed; ISO 75-2/A

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	304 - 318 $\text{Å}^\circ\text{C}$	579 - 604 $\text{Å}^\circ\text{F}$	
Front Barrel Temperature	316 - 329 $\text{Å}^\circ\text{C}$	601 - 624 $\text{Å}^\circ\text{F}$	
Melt Temperature	321 - 343 $\text{Å}^\circ\text{C}$	610 - 649 $\text{Å}^\circ\text{F}$	
Mold Temperature	135 $\text{Å}^\circ\text{C}$	275 $\text{Å}^\circ\text{F}$	
Drying Temperature	110 $\text{Å}^\circ\text{C}$	230 $\text{Å}^\circ\text{F}$	
	@Time 14400 sec	@Time 4.00 hour	
Moisture Content	$\leq 0.045\%$	$\leq 0.045\%$	

Descriptive Properties	Value	Comments
Additive	Heat Stabilizer	

Descriptive Properties	Impact Modifier Value	Comments
Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	Latin America	
	North America	
Color	Black; Natural	
Form	Pellets	
Processing Technique	Injection Molding	
RoHS Compliance	RoHS Compliant	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China