Amodel® AT-1125 HS

Polyphthalamide

Solvay Specialty Polymers

Message:

Amodel ® AT-1125 HS polyphthalamide (PPA) is a toughened, heat stabilized 25% 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.

Typical applications include bearings, bearing retainers/cages, housings, chemical processing equipment components, motor frames, sporting equipment, lawn and garden equipment and components that require press-fit or snap-fit assembly.

Black:	AT-1	125	HS	BΚ	324	

General Information		
UL YellowCard	E95746-253247	
Filler / Reinforcement	Glass fiber reinforced material, 25% filler by weight	
Additive	Impact modifier	
	heat stabilizer	
Features	Good dimensional stability	
	Impact modification	
	Good chemical resistance	
	Heat resistance, high	
	Thermal Stability	
Uses	Lawn and Garden Equipment	
	Electrical appliances	
	Industrial components	
	Industrial application	
	Machine/mechanical parts	
	Home appliance components	
	Metal substitution	
	Connector	
	Parts under the hood of a car	
	Automotive Electronics	
	Application in Automobile Field	
	Fuel line	
	General	
	Shell	
	Bearing	
RoHS Compliance	RoHS compliance	
Appearance	Black	
Forms	Particle	

Processing Method	Injection mo	olding		
Physical	Dry	Conditioned	Unit	Test Method
Density	1.35		g/cm³	ISO 1183/A
Molding Shrinkage				ASTM D955
Flow	0.40		%	ASTM D955
Transverse flow	0.60		%	ASTM D955
Water Absorption (24 hr)	0.20		%	ASTM D570
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus				
	8480		MPa	ASTM D638
	8890		MPa	ISO 527-2
Tensile Strength				
Fracture	174		MPa	ASTM D638
Fracture	190		MPa	ISO 527-2
Tensile Elongation				
Fracture	3.2		%	ASTM D638
Fracture	2.5		%	ISO 527-2
Flexural Modulus				
	7580	7580	MPa	ASTM D790
	7790		MPa	ISO 178
Flexural Stress				
	240		MPa	ISO 178
Yield	255	200	MPa	ASTM D790
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength	8.8		kJ/m²	ISO 179/1eA
Notched Izod Impact				
	120	85	J/m	ASTM D256
	8.8		kJ/m²	ISO 180/1A
Unnotched Izod Impact	1100	800	J/m	ASTM D256
Instrumented Dart Impact				ASTM D3763
Energy as Maximum				
Load ¹		1.90	J	ASTM D3763
Total Energy		9.36	J	ASTM D3763
Total energy	13.8		J	ASTM D3763
Maximum load energy ²	2.03		J	ASTM D3763
Thermal	Dry	Conditioned	Unit	Test Method
Deflection Temperature Under Load				
0.45 MPa, not annealed	279		°C	ASTM D648
1.8 MPa, not annealed	235		°C	ASTM D648
1.8 MPa, not annealed	280		°C	ISO 75-2/A
Melting Temperature	311		°C	ISO 11357-3, ASTM D3418

Injection	Dry	Unit	
Drying Temperature	121		°C
Drying Time	4.0		hr
Suggested Max Moisture	0.10		%
Hopper Temperature	79.4		°C
Rear Temperature	304 - 318		°C
Front Temperature	316 - 329		°C
Processing (Melt) Temp	321 - 343		°C
Mold Temperature	135		°C
Injection instructions			

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.

NOTE	
	Maximum Load: 230 lb
1.	(1020 N)
	Maximum load: 280 lb
2.	(1240 N)

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Recommended distributors for this material

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