

Amodel® AT-1125 HS

polyphthalamide

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-1125 HS BK 324

General

Material Status	• Commercial: Active	
Availability	<ul style="list-style-type: none"> • Africa & Middle East • Asia Pacific • Europe 	<ul style="list-style-type: none"> • Latin America • North America
Filler / Reinforcement	• Glass Fiber, 25% Filler by Weight	
Additive	• Heat Stabilizer	• Impact Modifier
Features	<ul style="list-style-type: none"> • Chemical Resistant • Good Dimensional Stability • Heat Stabilized 	<ul style="list-style-type: none"> • High Heat Resistance • Impact Modified
Uses	<ul style="list-style-type: none"> • Appliance Components • Appliances • Automotive Applications • Automotive Electronics • Automotive Under the Hood • Bearings • Connectors • Fuel Lines 	<ul style="list-style-type: none"> • General Purpose • Housings • Industrial Applications • Industrial Parts • Lawn & Garden Equipment • Machine/Mechanical Parts • Metal Replacement
RoHS Compliance	• RoHS Compliant	
Automotive Specifications	<ul style="list-style-type: none"> • ASTM D4000 PA123 G25 • ASTM D4000 PPA0111 G25 KD160 KN075 LD002 PN080 YI250 • ASTM D6779 PA123G25 • ISO 1874 PA6T/6I/66-HI, MH, 12-080, GF25 	
Appearance	• Black	
Forms	• Pellets	
Processing Method	• Injection Molding	

Amodel® AT-1125 HS

polyphthalamide

Physical	Dry	Conditioned	Unit	Test method
Density	1.35	--	g/cm ³	ISO 1183/A
Molding Shrinkage				ASTM D955
Flow	0.40	--	%	
Across Flow	0.60	--	%	
Water Absorption (24 hr)	0.20	--	%	ASTM D570
Mechanical	Dry	Conditioned	Unit	Test method
Tensile Modulus				
--	8480	--	MPa	ASTM D638
--	8890	--	MPa	ISO 527-1
Tensile Strength				
Break	174	--	MPa	ASTM D638
Break	190	--	MPa	ISO 527-2
Tensile Elongation				
Break	3.2	--	%	ASTM D638
Break	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/m ²	ISO 179/1eA
Notched Izod Impact				
--	120	85	J/m	ASTM D256
--	8.8	--	kJ/m ²	ISO 180/1A
Unnotched Izod Impact	1100	800	J/m	ASTM D4812
Instrumented Dart Impact				ASTM D3763
Energy as Maximum Load ¹	--	1.90	J	
Energy at Maximum Load ²	2.03	--	J	
Total Energy	13.8	9.36	J	
Thermal	Dry	Conditioned	Unit	Test method
Deflection Temperature Under Load				
0.45 MPa, Unannealed	279	--	°C	ASTM D648
1.8 MPa, Unannealed	235	--	°C	ASTM D648
1.8 MPa, Unannealed	280	--	°C	ISO 75-2/A
Melting Temperature	311	--	°C	ISO 11357-3 ASTM D3418

Amodel® AT-1125 HS

polyphthalamide

Injection	Dry Unit
Drying Temperature	121 °C
Drying Time	4.0 hr
Suggested Max Moisture	0.030 to 0.060 %
Hopper Temperature	79 °C
Rear Temperature	304 to 318 °C
Front Temperature	316 to 329 °C
Processing (Melt) Temp	321 to 343 °C
Mold Temperature	135 °C

Injection Notes

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.

Notes

Typical properties: these are not to be construed as specifications.

¹ Maximum Load: 230 lb (1020 N)

² Maximum Load: 280 lb (1240 N)

www.syensqo.com

Safety Data Sheets (SDS) are available by emailing us or contacting your sales representative. Always consult the appropriate SDS before using any of our products.

Neither Syensqo nor any of its affiliates makes any warranty, express or implied, including merchantability or fitness for use, or accepts any liability in connection with this product, related information or its use. Some applications of which Syensqo's products may be proposed to be used are regulated or restricted by applicable laws and regulations or by national or international standards and in some cases by Syensqo's recommendation, including applications of food/feed, water treatment, medical, pharmaceuticals, and personal care. Only products designated as part of the Solviva® family of biomaterials may be considered as candidates for use in implantable medical devices. The user alone must finally determine suitability of any information or products for any contemplated use in compliance with applicable law, the manner of use and whether any patents are infringed. The information and the products are for use by technically skilled persons at their own discretion and risk and does not relate to the use of this product in combination with any other substance or any other process. This is not a license under any patent or other proprietary right.

All trademarks and registered trademarks are property of the companies that comprise the Syensqo or their respective owners.

© 2024 2023 Syensqo. All rights reserved.

