

Amodel® FC-1150

polyphthalamide

Amodel® FC-1150 is an FDA-approved, 50% glass fiber reinforced resin designed for high strength and stiffness. This combines with its excellent thermal properties, low water absorption and good hydrolytic stability to make it particularly suited for components used in food service and consumer applications such as coffee machines and ovens.

- Natural: FC-1150 NT
- Black: FC-1150 BK 946

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 50% Filler by Weight		
Features	• Chlorine Resistant • Good Chemical Resistance • Good Creep Resistance	• Good Dimensional Stability • Good Stiffness • High Stiffness	• High Strength • High Temperature Strength • Low Moisture Absorption
Uses	• Appliances • Housings	• Non-specific Food Applications • Plumbing Parts	• Pump Parts
Agency Ratings	• EU 10/2011	• FDA 21 CFR 176.170(c)	
RoHS Compliance	• RoHS Compliant		
Appearance	• Black	• Natural Color	
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical

	Typical Value	Unit	Test method
Density	1.67	g/cm ³	ISO 1183/A
Molding Shrinkage			ASTM D955
Flow : 1.00 mm ¹	0.16	%	
Flow : 1.00 mm ²	0.14	%	
Flow : 2.00 mm ¹	0.15	%	
Flow : 2.00 mm ²	0.18	%	
Across Flow : 1.00 mm ¹	0.46	%	
Across Flow : 1.00 mm ²	0.42	%	
Across Flow : 2.00 mm ¹	0.42	%	
Across Flow : 2.00 mm ²	0.43	%	

Mechanical

	Typical Value	Unit	Test method
Tensile Modulus	19100	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	270	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.0	%	ISO 527-2
Flexural Modulus (23°C)	18400	MPa	ISO 178
Flexural Stress	400	MPa	ISO 178
Flexural Strain (23°C)	2.40		ISO 178

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Impact	Typical Value	Unit	Test method
Charpy Notched Impact Strength	12	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength	88	kJ/m ²	ISO 179

Thermal	Typical Value	Unit	Test method
Heat Deflection Temperature 1.8 MPa, Unannealed	300	°C	ISO 75-2/Af

Injection	Typical Value	Unit
Drying Temperature	120	°C
Drying Time	4.0	hr
Suggested Max Moisture	0.030 to 0.060	%
Rear Temperature	315 to 330	°C
Middle Temperature	320 to 340	°C
Front Temperature	325 to 345	°C
Processing (Melt) Temp	340 to 360	°C
Mold Temperature	160	°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 Pressure = 500 bar

² Pressure = 750 bar

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