

Amodel® FC-1140

Polyphthalamide
Solvay Specialty Polymers

Message:

Amodel® FC-1140 is an FDA-approved, 40% 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 coffee machines and ovens.

Natural: FC-1140 NT

Black: FC-1140 BK 946

General Information			
UL YellowCard	E95746-101652134		
Filler / Reinforcement	Glass fiber reinforced material, 40% filler by weight		
Features	Good dimensional stability		
	Low hygroscopicity		
	Rigidity, high		
	High strength		
	High temperature strength		
	Good creep resistance		
	Good chemical resistance		
Uses	Chlorine resistance		
	Pump parts		
	Electrical appliances		
	Non-specific food applications		
	Pipe components		
Agency Ratings	Shell		
	FDA 21 CFR 176.170(c)		
RoHS Compliance	Europe 10/1/2011 12:00:00 AM		
	RoHS compliance		
Appearance	Black		
	Natural color		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Density	1.54	g/cm ³	ISO 1183/A
Molding Shrinkage			ASTM D955
Flow: 1.00mm ¹	0.16	%	ASTM D955

Flow: 1.00mm ²	0.18	%	ASTM D955
Flow: 2.00mm ³	0.21	%	ASTM D955
Flow: 2.00mm ⁴	0.25	%	ASTM D955
Transverse flow: 1.00mm ⁵	0.50	%	ASTM D955
Transverse flow: 1.00mm ⁶	0.57	%	ASTM D955
Transverse flow: 2.00mm ⁷	0.48	%	ASTM D955
Transverse flow: 2.00mm ⁸	0.54	%	ASTM D955

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	15400	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	250	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.0	%	ISO 527-2
Flexural Modulus (23°C)	14700	MPa	ISO 178
Flexural Stress	360	MPa	ISO 178
Flexural Strain (23°C)	2.50		ISO 178

Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength	10	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength	75	kJ/m ²	ISO 179

Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (1.8 MPa, Unannealed)	297	°C	ISO 75-2/Af

Injection	Nominal Value	Unit
Drying Temperature	120	°C
Drying Time	4.0	hr
Suggested Max Moisture	0.030 - 0.060	%
Rear Temperature	315 - 330	°C
Middle Temperature	320 - 340	°C
Front Temperature	324 - 345	°C
Processing (Melt) Temp	340 - 360	°C
Mold Temperature	160	°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

1. Pressure = 750 bar
2. Pressure = 500 bar
3. Pressure = 750 bar
4. Pressure = 500 bar
5. Pressure = 750 bar
6. Pressure = 500 bar
7. Pressure = 750 bar
8. Pressure = 500 bar

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