

Amodel® DW-1140

polyphthalamide

Amodel® DW-1140 is a 40% glass-fiber-reinforced resin designed for high strength and stiffness and improved hydrolytic stability. This material has low moisture absorption and a low coefficient of thermal expansion, which means excellent dimensional stability. Creep resistance is also exceptional.

This grade has been approved for use with potable water in the United States, France, Germany, and the United Kingdom.

- Black: DW-1140 BK938

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 40% Filler by Weight		
Features	• Chlorine Resistant • Good Chemical Resistance • Good Creep Resistance	• Good Dimensional Stability • High Stiffness • High Strength	• High Temperature Strength • Low Moisture Absorption
Uses	• Appliances • Consumer Applications • Filters	• Housings • Industrial Applications • Plumbing Parts	• Pump Parts • Valves/Valve Parts
RoHS Compliance	• RoHS Compliant		
Appearance	• Black	• Natural Color	
Forms	• Pellets		
Processing Method	• Injection Molding		

Physical	Typical Value	Unit	Test method
Density	1.55	g/cm ³	ISO 1183/A

Mechanical	Typical Value	Unit	Test method
Tensile Modulus	15300	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	240	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.2	%	ISO 527-2
Flexural Modulus (23°C)	14000	MPa	ISO 178
Flexural Strength (Break, 23°C)	330	MPa	ISO 178
Flexural Strain at Break (23°C)	2.5	%	ISO 178

Impact	Typical Value	Unit	Test method
Charpy Notched Impact Strength	9.3	kJ/m ²	ISO 179
Charpy Unnotched Impact Strength	63	kJ/m ²	ISO 179
Notched Izod Impact Strength	9.0	kJ/m ²	ISO 180

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

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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.

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