

# Amodel® DW-1140

Polyphthalamide  
Solvay Specialty Polymers

Message:

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 Information			
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		
	Valve/valve components		
	Industrial application		
	Pipe components		
	Filter		
RoHS Compliance	Shell		
	Consumer goods application field		
Appearance	RoHS compliance		
Forms	Black		
	Natural color		
Processing Method	Particle		
Physical	Injection molding		
	Nominal Value	Unit	Test Method
Density	1.55	g/cm³	ISO 1183/A
Mechanical	Nominal Value		
	Nominal Value	Unit	Test Method
Tensile Modulus	14000	MPa	ISO 527-2
Tensile Stress (Break, 23°C)	230	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	2.0	%	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
<b>Impact</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Charpy Notched Impact Strength	9.3	kJ/m <sup>2</sup>	ISO 179
Charpy Unnotched Impact Strength	63	kJ/m <sup>2</sup>	ISO 179
Notched Izod Impact	9.0	kJ/m <sup>2</sup>	ISO 180
<b>Thermal</b>	<b>Nominal Value</b>	<b>Unit</b>	<b>Test Method</b>
Heat Deflection Temperature (1.8 MPa, Unannealed)	300	°C	ISO 75-2/Af
<b>Injection</b>	<b>Nominal Value</b>	<b>Unit</b>	
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	325 - 345	°C	
Processing (Melt) Temp	340 - 360	°C	
Mold Temperature	160	°C	
<b>Injection instructions</b>			

**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.

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**Recommended distributors for this material**

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