

Amodel® A-1145 DW

polyphthalamide

Amodel® A-1145 DW is a 45% 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.

- Natural: A-1145 NT DW
- Black: A-1145 BK 937 DW

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

General

Material Status	• Commercial: Active	
Availability	• Africa & Middle East • Asia Pacific • Europe	• Latin America • North America
Filler / Reinforcement	• Glass Fiber, 45% Filler by Weight	
Features	• Chemical Resistant • Chlorine Resistant • Creep Resistant • Good Dimensional Stability • Good Stiffness	• 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
Agency Ratings	• NSF STD-61 ¹	
RoHS Compliance	• RoHS Compliant	
Appearance	• Black	• Natural Color
Forms	• Pellets	
Processing Method	• Injection Molding	

Physical	Typical Value	Unit	Test method
Density	1.61	g/cm ³	ISO 1183/A

Mechanical	Typical Value	Unit	Test method
Tensile Modulus	15100	MPa	ISO 527-2
Tensile Stress (Yield)	232	MPa	ISO 527-2
Tensile Strain (Break, 23°C)	1.8	%	ISO 527-2
Flexural Modulus (23°C)	14000	MPa	ISO 178
Flexural Stress	330	MPa	ISO 178

Impact	Typical Value	Unit	Test method
Charpy Notched Impact Strength	9.9	kJ/m ²	ISO 179
Notched Izod Impact Strength	7.8	kJ/m ²	ISO 180

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Thermal	Typical Value	Unit	Test method
Heat Deflection Temperature 1.8 MPa, Unannealed	302	°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	316 to 329	°C
Middle Temperature	316 to 329	°C
Front Temperature	324 to 335	°C
Processing (Melt) Temp	321 to 343	°C
Mold Temperature	150	°C

Injection Notes

Mold Temperature:

- Higher tool temperatures might be required for thin wall sections

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 Tested at 82 °C (180 °F) (Commercial Hot)

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