



Bergamid™ B700 G50 H

Polyamide 6

Key Characteristics

General		
Material Status	• Commercial: Active	
Regional Availability	• Africa & Middle East • Europe • Asia Pacific • North America	
Filler / Reinforcement	• Glass Fiber, 50% Filler by Weight	
Features	• Heat Stabilized	
RoHS Compliance	• RoHS Compliant	
UL File Number	• QMFZ2.E76261	
Forms	• Pellets	

Technical Properties ¹

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density ²	1.55 g/cm ³	1.55 g/cm ³	DIN 53479
Dimensional Stability	0.0 %	0.0 %	ISO 2796
K-Value ³	74.0 to 78.0	74.0 to 78.0	
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Modulus (73°F (23°C))	2.18E+6 psi	15000 MPa	ISO 527-2/1
Tensile Stress (Break, 73°F (23°C))	31900 psi	220 MPa	ISO 527-2/5
Tensile Strain (Break, 73°F (23°C))	3.0 %	3.0 %	ISO 527-2/5
Impact	Typical Value (English)	Typical Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/A
-22°F (-30°C)	8.1 ft·lb/in ²	17 kJ/m ²	
73°F (23°C)	10 ft·lb/in ²	22 kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179
-22°F (-30°C)	43 ft·lb/in ²	90 kJ/m ²	
73°F (23°C)	48 ft·lb/in ²	100 kJ/m ²	
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Heat Deflection Temperature			ISO 75-2/B
66 psi (0.45 MPa), Unannealed	428 °F	220 °C	
Heat Deflection Temperature			ISO 75-2/A
264 psi (1.8 MPa), Unannealed	421 °F	216 °C	
Maximum Use Temperature			IEC 60216
-- ⁴	248 °F	120 °C	
Short Time	374 °F	190 °C	
Melting Temperature (DSC)	433 °F	223 °C	ISO 3146
RTI Elec ⁵			UL 746
0.028 in (0.70 mm)	221 °F	105 °C	
0.06 in (1.5 mm)	221 °F	105 °C	
0.12 in (3.0 mm)	221 °F	105 °C	
RTI Imp ⁵			UL 746
0.028 in (0.70 mm)	194 °F	90.0 °C	
0.06 in (1.5 mm)	194 °F	90.0 °C	
0.12 in (3.0 mm)	194 °F	90.0 °C	

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Thermal	Typical Value (English)	Typical Value (SI)	Test Method
RTI Str ⁵			UL 746
0.028 in (0.70 mm)	203 °F	95.0 °C	
0.06 in (1.5 mm)	230 °F	110 °C	
0.12 in (3.0 mm)	230 °F	110 °C	
Electrical	Typical Value (English)	Typical Value (SI)	Test Method
Surface Resistivity	> 1.0E+12 ohms	> 1.0E+12 ohms	IEC 60093
Volume Resistivity	> 1.0E+14 ohms·cm	> 1.0E+14 ohms·cm	IEC 60093
Dielectric Strength	610 V/mil	24 kV/mm	ASTM D149
Electric Strength	2300 V/mil	90 kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	4.20	4.20	IEC 60250
Arc Resistance	PLC 6	PLC 6	ASTM D495
Comparative Tracking Index (CTI)	PLC 1	PLC 1	UL 746
High Amp Arc Ignition (HAI) ⁵			UL 746
0.028 in (0.70 mm)	PLC 0	PLC 0	
0.06 in (1.5 mm)	PLC 0	PLC 0	
0.12 in (3.0 mm)	PLC 0	PLC 0	
High Voltage Arc Tracking Rate (HVTR)	PLC 0	PLC 0	UL 746
Hot-wire Ignition (HWI) ⁵			UL 746
0.028 in (0.70 mm)	PLC 4	PLC 4	
0.06 in (1.5 mm)	PLC 3	PLC 3	
0.12 in (3.0 mm)	PLC 3	PLC 3	
Flammability	Typical Value (English)	Typical Value (SI)	Test Method
Flame Rating			UL 94
0.028 in (0.70 mm), ALL	HB	HB	
0.06 in (1.5 mm), ALL	HB	HB	
0.12 in (3.0 mm), ALL	HB	HB	
Flammability Classification			IEC 60695-11-10, -20
0.12 in (3.0 mm), ALL	HB40	HB40	
0.028 in (0.70 mm), ALL	HB75	HB75	
0.06 in (1.5 mm), ALL	HB75	HB75	

Notes

¹ Typical values are not to be construed as specifications.

² ±0.03 g/cm³

³ 96% H₂SO₄

⁴ Continuous (GTP 50% Tensile)

⁵ ALL

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