Bergamid™ XP6042701

Polyamide 6

Key Characteristics

General		
Material Status	• Commercial: Active	
Regional Availability	• Asia Pacific	
Filler / Reinforcement	• Carbon Fiber, 10% Filler by Weight	• Glass Fiber, 30% Filler by Weight
Forms	• Pellets	
Processing Method	• Injection Molding	

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.43	1.43	ASTM D792
Molding Shrinkage - Flow	1.0E-3 to 3.0E-3 in/in	0.10 to 0.30 %	ASTM D955
Mechanical	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Strength	23900 psi	165 MPa	ASTM D638
Flexural Modulus	1.31E+6 psi	9000 MPa	ASTM D790
Impact	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Charpy Notched Impact Strength	1.69 ft·lb/in	90.0 J/m	ASTM D256
Thermal	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Deflection Temperature Under Load			ASTM D648
264 psi (1.8 MPa), Unannealed	419 °F	215 °C	
Electrical	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Surface Resistivity	< 1.0E+9 ohms	< 1.0E+9 ohms	ASTM D257
Flammability	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Flame Rating (0.06 in (1.6 mm))	HB	HB	UL 94

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	212 to 230 °F	100 to 110 °C
Drying Time	4.0 to 6.0 hr	4.0 to 6.0 hr
Rear Temperature	446 to 464 °F	230 to 240 °C
Middle Temperature	446 to 482 °F	230 to 250 °C
Front Temperature	464 to 500 °F	240 to 260 °C
Nozzle Temperature	464 to 500 °F	240 to 260 °C
Mold Temperature	158 to 194 °F	70 to 90 °C
Injection Pressure	14500 to 21800 psi	100 to 150 MPa
Holding Pressure	7250 to 11600 psi	50.0 to 80.0 MPa
Back Pressure	43.5 to 72.5 psi	0.300 to 0.500 MPa
Screw Speed	80 to 160 rpm	80 to 160 rpm

Injection Notes

Injection Speed: 50 to 80%
Holding Time: 3 to 9 sec
Injection Time: 1 to 3.5 sec
Cycle Time: 18 to 60 sec