

Technical Data Sheet

Diamond 1011582CT PC E-14961B GF32 BLKBLK



Polycarbonate

Product Description

32% Glass Fiber Reinforced Polycarbonate

Processing Method Extrusion; Injection Molding

Filler/Reinforcement Glass Fiber, 32%

Typical Properties	Nominal Value	Units	Test Method
Physical			
Melt Flow Rate			
(300 °C/1.2 kg)	5.4	g/10 min	ASTM D1238
(300 °C/3.8 kg)	27	g/10 min	ASTM D1238
(300 °C/5.0 kg)	30	g/10 min	ASTM D1238
Density - Specific Gravity	1.43	g/cm ³	ASTM D792
Mechanical			
Flexural Strength at Yield, (1.3 mm/min)	118	MPa	ASTM D790
Tensile Strength at Break, (5.0 mm/min, 23 °C, 3.11 mm, Injection Molded)	117	MPa	ASTM D638
Flexural Modulus, (1.3 mm/min, 1% Secant)	7790	MPa	ASTM D790
Tensile Elongation at Break, (5.0 mm/min, 23 °C, 3.11 mm, Injection Molded)	2.7	%	ASTM D638
Tensile Modulus, (5.0 mm/min, 23 °C, 3.11 mm, Injection Molded)	440	MPa	ASTM D638
Impact			
Unnotched Izod Impact, (23 °C, 3.08 mm)	930	J/m	ASTM D4812
Notched Izod Impact, (23 °C, 3.07 mm)	180	J/m	ASTM D256
Thermal			
Deflection Temperature Under Load Unannealed (264 psi), (12.6 mm)	142	°C	ASTM D648
Deflection Temperature Under Load Unannealed (66 psi), (12.6 mm)	146	°C	ASTM D648
Coefficient of Linear Thermal Expansion (CLTE), Flow, (-20 to 130 °C)	1.8E-5	cm/cm/°C	ASTM D696
Coefficient of Linear Thermal Expansion (CLTE), Perpendicular, (-20 to 130 °C)	6.5E-5	cm/cm/°C	ASTM D696
Flammable			
Burning Rate			
(2.00 mm)	<100	mm/min	ISO 3795
(2.00 mm)	<100	mm/min	FMVSS 302

Injection Parameters	Nominal Value	Units
Drying Time	3.0 to 6.0	hr
Drying Temperature	121	°C
Nozzle Temperature	304 to 338	°C
Processing (Melt) Temp	316 to 343	°C
Front Temperature	304 to 338	°C
Middle Temperature	293 to 316	°C
Rear Temperature	282 to 304	°C
Mold Temperature	82 to 116	°C
Drying Time, Maximum	6	hr