

Celanex® 1632Z

Polybutylene Terephthalate

Celanese Corporation

Message:

Celanex 1632Z is a general purpose, 15% fiberglass reinforced polybutylene terephthalate with a good balance of mechanical properties and processability.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 15% filler by weight		
Features	Impact resistance, good		
	Workability, good		
	General		
Uses	General		
RoHS Compliance	Contact manufacturer		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.41	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR)	9.0	g/10 min	ASTM D1238
Molding Shrinkage			
Flow	0.30 - 0.70	%	ASTM D955
Flow direction	0.30 - 0.50	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	0.10	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	90		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	5200	MPa	ISO 527-2/1A/1
Tensile Strength			
Fracture, 23°C	93.1	MPa	ASTM D638
Fracture	95.0	MPa	ISO 527-2/1A/5
Tensile Elongation			
Fracture, 23°C	5.5	%	ASTM D638
Fracture	5.4	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	5400	MPa	ISO 178
Flexural Stress (23°C)	155	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	5.4	kJ/m ²	ISO 179/1eA
Notched Izod Impact (23°C)	5.3	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	217	°C	ISO 75-2/B

0.45 MPa, annealed	213	°C	ASTM D648
1.8 MPa, not annealed	192	°C	ASTM D648
1.8 MPa, not annealed	189	°C	ISO 75-2/A
Glass Transition Temperature ¹	60.0	°C	ISO 11357-2
Melting Temperature ²	225	°C	ISO 11357-3, ASTM D3418
Linear thermal expansion coefficient			ISO 11359-2
Flow	4.0E-5	cm/cm/°C	ISO 11359-2
Lateral	1.1E-4	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	> 1.0E+16	ohms·cm	ASTM D257
Dielectric Strength ³	18	kV/mm	ASTM D149
Dielectric Constant (1 kHz)	3.40		ASTM D150
Dissipation Factor (1 MHz)	2.0E-3		ASTM D150
Arc Resistance	125	sec	ASTM D495
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.800 mm)	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	120 - 130	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.020	%	
Suggested Max Regrind	25	%	
Hopper Temperature	20.0 - 50.0	°C	
Rear Temperature	230 - 240	°C	
Middle Temperature	235 - 250	°C	
Front Temperature	235 - 250	°C	
Nozzle Temperature	250 - 260	°C	
Processing (Melt) Temp	235 - 260	°C	
Mold Temperature	65.0 - 93.0	°C	
Injection Rate	Moderate-Fast		
Back Pressure	0.00 - 0.345	MPa	
Injection instructions			
Manifold Temperature: 250 to 260°C Zone 4 Temperature: 240 to 260°C Feed Temperature: 230 to 240°C			
NOTE			
1.	10°C/min		
2.	10°C/min		
3.	Method A (short time)		

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