Celanex® 5202

Polybutylene Terephthalate

Celanese Corporation

Message:

Celanex 5202 is a 15% glass filled polyester that features improved surface gloss and has an excellent balance of mechanical properties, processability, and color stability under heat and UV exposure. A typical application for Celanex 5202 is oven handles.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 15% filler by weight		
Features	Gloss, Medium Workability, good Good color stability		
Uses	Handle		
RoHS Compliance	Contact manufacturer		
Physical	**Nominal Value**	**Unit**	**Test Method**
Density	1.44	g/cm³	ISO 1183
Molding Shrinkage			ISO 294-4
Vertical flow direction	0.70	%	ISO 294-4
Flow direction	0.10 - 0.60	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	0.17	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	6100	MPa	ISO 527-2/1A/1
Tensile Stress (Break)	100	MPa	ISO 527-2/1A/5
Tensile Strain (Break)	2.5	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	5300	MPa	ISO 178
Flexural Stress (23°C)	150	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	4.5	kJ/m²	ISO 179/1eA
23°C	4.7	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	17	kJ/m²	ISO 179/1eU
23°C	15	kJ/m²	ISO 179/1eU
Notched Izod Impact (23°C)	4.4	kJ/m²	ISO 180/1A
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
0.45 MPa, not annealed	215	°C	ISO 75-2/B
1.8 MPa, not annealed	180	°C	ISO 75-2/A
Glass Transition Temperature [1]	50.0	°C	ISO 11357-2

Melting Temperature [2]	225	°C	ISO 11357-3
Linear thermal expansion coefficient			ISO 11359-2
Flow	4.2E-5	cm/cm/°C	ISO 11359-2
Lateral	7.3E-5	cm/cm/°C	ISO 11359-2
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	4.0E+15	ohms	IEC 60093
Volume Resistivity	7.0E+16	ohms·cm	IEC 60093
Dielectric Strength	17	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	2.70		IEC 60250
1 MHz	2.70		IEC 60250
Dissipation Factor (1 MHz)	0.014		IEC 60250
Comparative Tracking Index	225	V	IEC 60112
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	%	
Hopper Temperature	20.0 - 50.0	°C	
Rear Temperature	230 - 250	°C	
Middle Temperature	235 - 255	°C	
Front Temperature	235 - 255	°C	
Nozzle Temperature	250 - 265	°C	
Processing (Melt) Temp	235 - 265	°C	
Mold Temperature	65.0 - 93.0	°C	
Injection Rate	Moderate-Fast		
Injection instructions			
Manifold Temperature: 250 to 265°CZone 4 Temperature: 240 to 260°CFeed Temperature: 230 to 250°C			
NOTE			
1.	10°C/min		
2.	10°C/min		

Recommended distributors for this material

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