

Celanex® 4202

Polybutylene Terephthalate

Celanese Corporation

Message:

Celanex 4202 is a 15% glass reinforced, impact modified polybutylene terephthalate with excellent surface appearance.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 15% filler by weight		
Additive	Impact modifier		
Features	Impact modification		
	Impact resistance, good		
	Excellent appearance		
RoHS Compliance		Contact manufacturer	
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.38	g/cm ³	ASTM D792, ISO 1183
Molding Shrinkage			
Flow	0.50 - 1.0	%	ASTM D955
Vertical flow direction	0.90	%	ISO 294-4
Flow direction	0.40	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	0.16	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	4830	MPa	ASTM D638
--	5200	MPa	ISO 527-2/1A/1
Tensile Strength			
Yield, 23°C	85.5	MPa	ASTM D638
Fracture, 23°C	84.1	MPa	ASTM D638
Fracture	86.0	MPa	ISO 527-2/1A/5
Tensile Elongation			
Fracture, 23°C	3.8	%	ASTM D638
Fracture	4.4	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	5100	MPa	ISO 178
Flexural Stress (23°C)	141	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	5.7	kJ/m ²	ISO 179/1eA
23°C	11	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU

-30°C	37	kJ/m ²	ISO 179/1eU
23°C	52	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	12	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	216	°C	ISO 75-2/B
0.45 MPa, annealed	216	°C	ASTM D648
1.8 MPa, not annealed	193	°C	ASTM D648
1.8 MPa, not annealed	183	°C	ISO 75-2/A
Glass Transition Temperature ¹	44.0	°C	ISO 11357-2
Melting Temperature ²	225	°C	ISO 11357-3, ASTM D3418
Linear thermal expansion coefficient			ISO 11359-2
Flow	3.6E-5	cm/cm/°C	ISO 11359-2
Lateral	1.0E-4	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+17	ohms	IEC 60093
Volume Resistivity	2.0E+16	ohms·cm	IEC 60093
Dielectric Strength	22	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	3.40		IEC 60250
1 MHz	3.20		IEC 60250
Dissipation Factor (1 MHz)	0.020		IEC 60250
Comparative Tracking Index	> 600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating	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	Fast		
Back Pressure	0.00 - 0.345	MPa	
Injection instructions			
Manifold Temperature: 250 to 260°CZone 4 Temperature: 240 to 260°CFeed Temperature: 230 to 240°C			
NOTE			

1.	10°C/min
2.	10°C/min

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