

Celanex® 3201

Polybutylene Terephthalate

Celanese Corporation

Message:

Celanex 3201 is a 15% glass reinforced general purpose thermoplastic polyester resin that offers a superior combination of mechanical, electrical, and thermal properties, together with outstanding processability, good chemical resistance, and toughness.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 15% filler by weight		
Features	Workability, good		
	Good electrical performance		
	Good chemical resistance		
	Good toughness		
	General		
RoHS Compliance	Contact manufacturer		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity			
--	1.41	g/cm ³	ASTM D792
--	1.42	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (250°C/2.16 kg)	17.0	cm ³ /10min	ISO 1133
Molding Shrinkage			
Flow	0.50 - 0.70	%	ASTM D955
Flow	0.50 - 0.70	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	0.20	%	ISO 62
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	6000	MPa	ISO 527-2/1A/1
Tensile Strength			
Fracture, 23°C	93.1	MPa	ASTM D638
Fracture	100	MPa	ISO 527-2/1A/5
Tensile Elongation			
Fracture, 23°C	3.0	%	ASTM D638
Fracture	3.5	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	5600	MPa	ISO 178
Flexural Stress (23°C)	160	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (23°C)	6.5	kJ/m ²	ISO 179/1eA
Notched Izod Impact			ISO 180/1A

-30°C	7.0	kJ/m ²	ISO 180/1A
23°C	7.0	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			
0.45 MPa, not annealed	213	°C	ASTM D648
0.45 MPa, not annealed	218	°C	ISO 75-2/B
1.8 MPa, not annealed	192	°C	ASTM D648
1.8 MPa, not annealed	195	°C	ISO 75-2/A
Glass Transition Temperature	60.0	°C	ISO 11357-2
Vicat Softening Temperature	220	°C	ISO 306/B50
Melting Temperature ¹	225	°C	ISO 11357-3, ASTM D3418
CLTE - Flow	3.5E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+15	ohms·cm	ASTM D257
Dielectric Strength ²	18	kV/mm	ASTM D149
Dielectric Constant (1 kHz)	3.50		ASTM D150
Flammability	Nominal Value	Unit	Test Method
Flame Rating			UL 94
--	HB		UL 94
0.9 mm	HB		UL 94
Injection	Nominal Value	Unit	
Suggested Max Regrind	25	%	
Hopper Temperature	20 - 50	°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 - 93	°C	
Injection Rate	Moderate-Fast		
Injection instructions			
Feed Temperature: 230 to 240°CZone 4 Temperature: 240 to 260°CManifold Temperature: 250 to 260°C			
NOTE			
1.	10°C/min		
2.	Method A (short time)		

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