Celanex® 2001

Polybutylene Terephthalate

Celanese Corporation

Message:

Celanex 2001 is an unreinforced polybutylene terephthalate resin with improved hydrolysis resistance developed for use in fiber optic buffer tube applications. Celanex 2001 exhibits the high melt strength required for profile extrusion.

General Information			
Features	Good melt strength Hydrolysis resistance		
RoHS Compliance	Contact manufacturer		
Processing Method	Extrusion		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.31	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR)	6.5	g/10 min	ASTM D1238
Molding Shrinkage			
Flow	1.8 - 2.0	%	ASTM D955
Vertical flow direction	1.8 - 2.0	%	ISO 294-4
Flow direction	1.8 - 2.0	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	0.19	%	ISO 62
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	72		ISO 2039-2
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	2600	MPa	ISO 527-2/1A/1
Tensile Strength			
Yield, 23°C	55.2	MPa	ASTM D638
Yield	60.0	MPa	ISO 527-2/1A/50
Fracture	37.0	MPa	ISO 527-2/1A/50
50% strain	33.0	MPa	ISO 527-2/1A/50
Tensile Strain			
Yield	6.0	%	ISO 527-2/1A/50
Fracture, 23°C	200	%	ASTM D638
Fracture	200	%	ISO 527-2/1A/50
Nominal Tensile Strain at Break	> 50	%	ISO 527-2/1A/50
Flexural Modulus (23°C)	2500	MPa	ISO 178
Flexural Stress (23°C)	80.0	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	4.2	kJ/m²	ISO 179/1eA

23°C	7.0	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	No Break		ISO 179/1eU
23°C	No Break		ISO 179/1eU
Notched Izod Impact (23°C)	5.5	kJ/m²	ISO 180/1A
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
0.45 MPa, not annealed	150	°C	ISO 75-2/B
1.8 MPa, not annealed	50.0	°C	ISO 75-2/A
Glass Transition Temperature [1]	60.0	°C	ISO 11357-2
Vicat Softening Temperature	185	°C	ISO 306/B50
Melting Temperature [2]	225	°C	ISO 11357-3, ASTM D3418
Linear thermal expansion coefficient			ISO 11359-2
Flow	1.3E-4	cm/cm/°C	ISO 11359-2
Lateral	8.8E-5	cm/cm/°C	ISO 11359-2
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity			
--	1.0E+17	ohms·cm	ASTM D257
--	> 1.0E+15	ohms·cm	IEC 60093
Dielectric Strength			
-- [3]	16	kV/mm	ASTM D149
--	15	kV/mm	IEC 60243-1
Dielectric Constant			
1 MHz	3.20		ASTM D150, IEC 60250
100 Hz	3.00		IEC 60250
Dissipation Factor			
1 MHz	2.0E-3		ASTM D150
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	Moderate-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 2420°C

NOTE	
1.	10°C/min
2.	10°C/min
3.	Method A (short time)

Recommended distributors for this material

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