

Celanex® 6500

Polybutylene Terephthalate

Celanese Corporation

Message:

Celanex 6500 is a 30% glass/mineral polyester with improved surface finish and a good balance of mechanical properties and processability.

General Information			
UL YellowCard	E45575-316555		
Filler / Reinforcement	Glass \mineral, 30% filler by weight		
Features	Low warpage		
	Workability, good		
	Excellent appearance		
RoHS Compliance	Contact manufacturer		
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1)		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.55	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR)	22	g/10 min	ASTM D1238
Molding Shrinkage			
Flow	0.20 - 0.50	%	ASTM D955
Vertical flow direction	0.50 - 0.80	%	ISO 294-4
Flow direction	0.0 - 0.50	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	0.19	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	89		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	9700	MPa	ISO 527-2/1A/1
Tensile Strength			
Fracture, 23°C	110	MPa	ASTM D638
Fracture	125	MPa	ISO 527-2/1A/5
Tensile Elongation			
Fracture, 23°C	3.0	%	ASTM D638
Fracture	2.2	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	9500	MPa	ISO 178
Flexural Stress (23°C)	180	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	6.4	kJ/m²	ISO 179/1eA
23°C	7.1	kJ/m²	ISO 179/1eA

Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	30	kJ/m ²	ISO 179/1eU
23°C	30	kJ/m ²	ISO 179/1eU
Notched Izod Impact (23°C)	5.3	kJ/m ²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	31	kJ/m ²	ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, not annealed	223	°C	ISO 75-2/B
0.45 MPa, annealed	220	°C	ASTM D648
1.8 MPa, not annealed	204	°C	ASTM D648
1.8 MPa, not annealed	202	°C	ISO 75-2/A
Glass Transition Temperature ¹	54.0	°C	ISO 11357-2
Melting Temperature ²	225	°C	ISO 11357-3, ASTM D3418
Linear thermal expansion coefficient			ISO 11359-2
Flow	2.8E-5	cm/cm/°C	ISO 11359-2
Lateral	8.5E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	3.0E+16	ohms	IEC 60093
Volume Resistivity			
--	2.0E+14	ohms·cm	ASTM D257
--	2.0E+16	ohms·cm	IEC 60093
Dielectric Strength			
-- ³	24	kV/mm	ASTM D149
--	22	kV/mm	IEC 60243-1
Dielectric Constant			
1 MHz	4.20		ASTM D150
100 Hz	3.50		IEC 60250
1 MHz	3.80		IEC 60250
Dissipation Factor			
1 MHz	0.020		ASTM D150
1 MHz	0.040		IEC 60250
Arc Resistance	124	sec	ASTM D495
Comparative Tracking Index	325	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 - 250	°C	

Middle Temperature	235 - 255	°C
Front Temperature	235 - 255	°C
Nozzle Temperature	240 - 265	°C
Processing (Melt) Temp	235 - 265	°C
Mold Temperature	65.0 - 96.0	°C
Injection Rate	Moderate-Fast	
Back Pressure	0.00 - 0.345	MPa

Injection instructions

Manifold Temperature: 250 to 265°C Zone 4 Temperature: 240 to 265°C Feed Temperature: 230 to 250°C

NOTE

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

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