Celanex® 3400

Polybutylene Terephthalate

Celanese Corporation

Message:

Celanex 3400 is a general purpose, 40% glass reinforced polybutylene terephthalate that offers a good combination of mechanical, electrical, and thermal properties. This grade provides outstanding processability and good chemical resistance.
Celanex 3400 is a high flow material.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 40% filler by weight		
Features	Workability, good Good electrical performance High liquidity Good chemical resistance General		
Uses	General		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	1.61	g/cm³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR)	8.0	g/10 min	ASTM D1238
Molding Shrinkage			
Flow	0.30 - 0.50	%	ASTM D955
Transverse flow	0.70	%	ISO 294-4
Flow	0.30 - 0.50	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	0.12	%	ISO 62
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (M-Scale)	93		ISO 2039-2
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			
23°C	11700	MPa	ASTM D638
--	12100	MPa	ISO 527-2/1A/1
Tensile Strength			
Fracture, 23°C	147	MPa	ASTM D638
Fracture	140	MPa	ISO 527-2/1A/5
Tensile Elongation			
Fracture, 23°C	2.0	%	ASTM D638
Fracture	2.4	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	11000	MPa	ISO 178
Flexural Stress (23°C)	215	MPa	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**

Charpy Notched Impact Strength			ISO 179/1eA
-30°C	9.5	kJ/m²	ISO 179/1eA
23°C	11	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	45	kJ/m²	ISO 179/1eU
23°C	47	kJ/m²	ISO 179/1eU
Notched Izod Impact (23°C)	10	kJ/m²	ISO 180/1A
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load			
0.45 MPa, not annealed	223	°C	ASTM D648
0.45 MPa, not annealed	225	°C	ISO 75-2/B
1.8 MPa, not annealed	209	°C	ASTM D648
1.8 MPa, not annealed	212	°C	ISO 75-2/A
Glass Transition Temperature [1]	45.0	°C	ISO 11357-2
Melting Temperature [2]	225	°C	ISO 11357-3, ASTM D3418
Linear thermal expansion coefficient			ISO 11359-2
Flow	1.5E-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+15	ohms	IEC 60093
Volume Resistivity			
--	1.0E+16	ohms·cm	ASTM D257
--	1.0E+15	ohms·cm	IEC 60093
Dielectric Strength			
-- [3]	19	kV/mm	ASTM D149
--	19	kV/mm	IEC 60243-1
Dielectric Constant			
1 MHz	3.90		ASTM D150
100 Hz	3.50		IEC 60250
1 MHz	3.40		IEC 60250
Dissipation Factor			
1 MHz	2.0E-3		ASTM D150
1 MHz	0.013		IEC 60250
Arc Resistance	127	sec	ASTM D495
Comparative Tracking Index			
--	350	V	IEC 60112
--	500	V	ASTM D3638
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (0.71 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 - 50	°C
Rear Temperature	230 - 240	°C
Middle Temperature	235 - 250	°C
Front Temperature	235 - 250	°C
Nozzle Temperature	240 - 260	°C
Processing (Melt) Temp	235 - 260	°C
Mold Temperature	65 - 96	°C
Injection Rate	Moderate-Fast	

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
3.	Method A (short time)

Recommended distributors for this material

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