

Celanex 4306

Polybutylene Terephthalate

Celanese Corporation

Message:

Celanex 4306 is a 30% glass reinforced, toughened, low warpage thermoplastic polyester.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Additive	Impact modifier		
Features	Impact modification		
	Low warpage		
	Good toughness		
RoHS Compliance	Contact manufacturer		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.50	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR)	10	g/10 min	ASTM D1238
Molding Shrinkage			
Flow	0.40 - 0.60	%	ASTM D955
Flow direction	0.40 - 0.60	%	ISO 294-4
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	73		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	9200	MPa	ISO 527-2/1A/1
Tensile Strength			
Fracture, 23°C	121	MPa	ASTM D638
Fracture	120	MPa	ISO 527-2/1A/5
Tensile Elongation			
Fracture, 23°C	3.0	%	ASTM D638
Fracture	2.9	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	8500	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	11	kJ/m ²	ISO 179/1eA
23°C	12	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	45	kJ/m ²	ISO 179/1eU
23°C	60	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	210	°C	ISO 75-2/B
0.45 MPa, annealed	223	°C	ASTM D648
1.8 MPa, not annealed	209	°C	ASTM D648
1.8 MPa, not annealed	164	°C	ISO 75-2/A
Melting Temperature ¹	225	°C	ISO 11357-3, ASTM D3418
Linear thermal expansion coefficient			ISO 11359-2
Flow	2.0E-5	cm/cm/°C	ISO 11359-2
Lateral	8.7E-5	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Dielectric Strength ²	19	kV/mm	ASTM D149
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 Re grind	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 240°C			
NOTE			
1.	10°C/min		
2.	Method A (short time)		

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