

Celanex® 4300FC

Polybutylene Terephthalate

Celanese Corporation

Message:

Celanex 4300FC is a toughened, 30% glass reinforced PBT for use in food contact applications.

General Information			
UL YellowCard	E45575-239387		
Filler / Reinforcement	Glass fiber reinforced material, 30% filler by weight		
Features	Compliance of Food Exposure		
RoHS Compliance	Contact manufacturer		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.53	g/cm ³	ASTM D792, ISO 1183
Melt Mass-Flow Rate (MFR)	7.0	g/10 min	ASTM D1238
Molding Shrinkage			
Flow	0.30 - 0.50	%	ASTM D955
Vertical flow direction	0.80	%	ISO 294-4
Flow direction	0.30 - 0.50	%	ISO 294-4
Water Absorption (Equilibrium, 23°C, 50% RH)	0.14	%	ISO 62
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (M-Scale)	91		ISO 2039-2
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	9300	MPa	ISO 527-2/1A/1
Tensile Strength			
Fracture, 23°C	124	MPa	ASTM D638
Fracture	130	MPa	ISO 527-2/1A/5
Tensile Elongation			
Fracture, 23°C	3.0	%	ASTM D638
Fracture	3.1	%	ISO 527-2/1A/5
Flexural Modulus (23°C)	9000	MPa	ISO 178
Flexural Stress (23°C)	205	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	8.5	kJ/m ²	ISO 179/1eA
23°C	11	kJ/m ²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	51	kJ/m ²	ISO 179/1eU
23°C	40	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	220	°C	ISO 75-2/B
0.45 MPa, annealed	223	°C	ASTM D648
1.8 MPa, not annealed	204	°C	ASTM D648
1.8 MPa, not annealed	200	°C	ISO 75-2/A
Glass Transition Temperature ¹	41.0	°C	ISO 11357-2
Melting Temperature ²	225	°C	ISO 11357-3, ASTM D3418
Linear thermal expansion coefficient			ISO 11359-2
Flow	2.4E-5	cm/cm/°C	ISO 11359-2
Lateral	8.0E-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+16	ohms · cm	ASTM D257
--	1.0E+15	ohms · cm	IEC 60093
Dielectric Strength			
-- ³	22	kV/mm	ASTM D149
--	20	kV/mm	IEC 60243-1
Dielectric Constant			
1 MHz	3.80		ASTM D150
100 Hz	2.80		IEC 60250
1 MHz	3.90		IEC 60250
Dissipation Factor			
1 MHz	2.0E-3		ASTM D150
1 MHz	0.022		IEC 60250
Comparative Tracking Index	400	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.710 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	20.0 - 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		
Injection instructions			

Manifold Temperature: 250 to 260°C Zone 4 Temperature: 240 to 260°C Feed Temperature: 230 to 240°C

NOTE

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

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