



Celapex® CL 500FC30

Celanese Corporation - Polyetheretherketone

Tuesday, November 5, 2019

General Information

Product Description

Celapex® 500FC30 is a standard flow, 30% carbon fiber/graphite/PTFE reinforced polyether ether ketone (PEEK) for injection molding and extrusion. It has excellent wear resistance, very low coefficient of friction and superior chemically resistant to aggressive environments. The typical applications of this product are extrusion stock shapes, and injection molded parts with higher impact, creep, and fatigue.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Carbon\Graphite\PTFE, 30% Filler by Weight		
Features	• Chemical Resistant • Creep Resistant	• Fatigue Resistant • Good Impact Resistance	• Low Friction • Wear Resistant
Processing Method	• Extrusion • Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.45	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (380°C/5.0 kg)	2.5	g/10 min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	0.70	%	
Flow	0.30	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Stress (Break)	21000	psi	ISO 527-2/1A/5
Tensile Strain (Break)	2.3	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	1.67E+6	psi	ISO 178
Flexural Stress (73°F)	33400	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	2.4	ft-lb/in ²	ISO 179/1eA
Charpy Unnotched Impact Strength (73°F)	17	ft-lb/in ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (264 psi, Unannealed)	599	°F	ISO 75-2/A
Glass Transition Temperature ²	289	°F	ISO 11357-2
Melting Temperature ²	649	°F	ISO 11357-3
CLTE - Flow			ISO 11359-2
-- ³	8.3E-6	in/in/°F	
-- ⁴	1.1E-5	in/in/°F	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+10	ohms-cm	IEC 60093

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	284 to 302	°F
Drying Time	4.0 to 8.0	hr
Suggested Max Moisture	0.030	%

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Injection	Nominal Value	Unit
Processing (Melt) Temp	734 to 770	°F
Mold Temperature	338 to 383	°F
Injection Rate	Moderate-Fast	
Back Pressure	< 290	psi

Notes

¹ Typical properties: these are not to be construed as specifications.

² 10°C/min

³ below

⁴ above