



Celapex® CL 100G

Celanese Corporation - Polyetheretherketone

Tuesday, November 5, 2019

General Information

Product Description

Celapex® 100G is a ultra high flow unreinforced polyether ether ketone (PEEK) for injection molding. It has food contact compliance for US (FDA) & EU. The typical applications of this product include complex geometry (thin wall, long flow length, high precision) injection molded parts.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Food Contact Acceptable	• Good Heat Resistance	• High Flow
Uses	• Thin-walled Parts		
Forms	• Pellets		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.31	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	1.7	%	
Flow	1.3	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	595000	psi	ISO 527-2/1A
Tensile Stress (Break)	16000	psi	ISO 527-2/1A/50
Tensile Strain (Break)	4.4	%	ISO 527-2/1A/50
Flexural Modulus (73°F)	609000	psi	ISO 178
Flexural Stress (73°F)	18900	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	2.9	ft·lb/in ²	ISO 179/1eA
Charpy Unnotched Impact Strength (73°F)	20	ft·lb/in ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (264 psi, Unannealed)	307	°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	2.3E-5	in/in/°F	
-- ⁴	4.2E-5	in/in/°F	
CLTE - Transverse			ISO 11359-2
-- ³	3.2E-5	in/in/°F	
-- ⁴	8.1E-5	in/in/°F	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+16	ohms·cm	IEC 60093
Electric Strength	660	V/mil	IEC 60243-1
Relative Permittivity (1 MHz)	2.70		IEC 60250
Dissipation Factor (1 MHz)	5.0E-3		IEC 60250
Comparative Tracking Index ⁵	150	V	IEC 60112

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Processing Information

Injection	Nominal Value	Unit
Drying Temperature	284 to 302	°F
Drying Time	3.0 to 4.0	hr
Suggested Max Moisture	0.030	%
Rear Temperature	662 to 698	°F
Middle Temperature	680 to 716	°F
Front Temperature	680 to 716	°F
Nozzle Temperature	680 to 716	°F
Processing (Melt) Temp	680 to 752	°F
Mold Temperature	320 to 374	°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

⁵ 100 Drop Voltage