



Thermx® CG033

Celanese Corporation - Polycyclohexylenedimethylene Terephthalate

Tuesday, November 5, 2019

General Information

Product Description

Thermx® CG033 is a 30% glass fiber reinforced polycyclohexylenedimethylene terephthalate for injection molding.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight		
RoHS Compliance	• Contact Manufacturer		
Processing Method	• Injection Molding		

ASTM & ISO Properties ¹

Physical	Nominal Value	Unit	Test Method
Density	1.45	g/cm ³	ISO 1183
Molding Shrinkage			ISO 294-4
Across Flow	0.80	%	
Flow	0.20	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1.23E+6	psi	ISO 527-2/1A
Tensile Stress (Break)	17400	psi	ISO 527-2/1A/5
Tensile Strain (Break)	2.0	%	ISO 527-2/1A/5
Flexural Modulus (73°F)	1.16E+6	psi	ISO 178
Flexural Stress (73°F)	26100	psi	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength (73°F)	3.8	ft·lb/in ²	ISO 179/1eA
Charpy Unnotched Impact Strength (73°F)	24	ft·lb/in ²	ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (66 psi, Unannealed)	518	°F	ISO 75-2/B
Heat Deflection Temperature (264 psi, Unannealed)	504	°F	ISO 75-2/A
Glass Transition Temperature ²	221	°F	ISO 11357-2
Melting Temperature ²	541	°F	ISO 11357-3
CLTE - Flow	1.8E-5	in/in/°F	ISO 11359-2
CLTE - Transverse	4.7E-5	in/in/°F	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Electric Strength	840	V/mil	IEC 60243-1
Comparative Tracking Index	560	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (0.06 in)	HB		UL 94
Oxygen Index	29	%	ISO 4589-2
Fill Analysis	Nominal Value	Unit	Test Method
Melt Density	1.42	g/cm ³	Internal Method
Melt Thermal Conductivity	1.4	Btu·in/hr/ft ² /°F	Internal Method

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Fill Analysis	Nominal Value	Unit	Test Method
Ejection Temperature	428	°F	
Specific Heat Capacity of Melt	0.351	Btu/lb/°F	

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	203	°F
Drying Time	4.0 to 6.0	hr
Processing (Melt) Temp	563 to 590	°F
Mold Temperature	176 to 248	°F

Notes

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

² 10°C/min