Celanese
The chemistry inside innovation™

THERMX® CG033

PCT

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

Note: Initial properties are from CAMPUS information published by Milan 3/2010

Product information

Resin Identification	PCT-GF30	ISO 1043
Part Marking Code	>PCT-GF30<	ISO 11469

Rheological properties

Moulding shrinkage, parallel	0.2	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.8	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	8500	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	120	MPa	ISO 527-1/-2
Tensile strain at break, 50mm/min	2	%	ISO 527-1/-2
Flexural modulus	8000	MPa	ISO 178
Flexural strength	180	MPa	ISO 178
Charpy impact strength, 23°C	50	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	8	kJ/m²	ISO 179/1eA
Izod notched impact strength, 23°C	7	kJ/m²	ISO 180/1A
Izod impact strength, 23°C	7	kJ/m²	ISO 180/1U
Poisson's ratio	0.34[C]		

[C]: Calculated

Thermal properties

Melting temperature, 10°C/min	283	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	100	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	262	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	270	°C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	32	E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	85	E-6/K	ISO 11359-1/-2
Thermal conductivity of melt	0.2	W/(m K)	ISO 22007-2
Specific heat capacity of melt	1470	J/(kg K)	ISO 22007-4

Flammability

Burning Behav. at 1.5mm nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	1.5	mm	IEC 60695-11-10
Oxygen index	29	%	ISO 4589-1/-2

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Electrical properties

Volume resistivity	>1E13	Ohm.m	IEC 62631-3-1
Surface resistivity	1E15	Ohm	IEC 62631-3-2
Electric strength	33	kV/mm	IEC 60243-1
Comparative tracking index	560		IEC 60112

Physical/Other properties

Density	1450	kg/m³	ISO 1183
Density of melt	1420	kg/m³	

Injection

Ejection temperature	220	°C

Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Special characteristics	Chemical resistant, Lead-free soldering resistant

Additional information

Injection molding

Preprocessing

Drying Recommended = Yes
Drying Temperature = 95°C
Drying Time, Dehumidified Dryer = 4-6h
Processing Moisture Content = <0.03 %

Processing

Melt Temperature Optimum = 300°C
Melt Temperature Range = 295-310°C
Mold Temperature Optimum = 100°C
Mold Temperature Range = 80-120°C

Processing Notes

Pre-Drying

Injection molding

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Automotive

OEM	STANDARD
Hyundai	MS941-03 Type J-2

Revised: 2024-05-15 Source: Celanese Materials Database