

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/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	8 kJ/m ²	ISO 179/1eA
Izod notched impact strength, 23°C	7 kJ/m ²	ISO 180/1A
Izod impact strength, 23°C	7 kJ/m ²	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/m ³	ISO 1183
Density of melt	1420 kg/m ³	

Injection

Ejection temperature	220 °C
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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
Hyundai

STANDARD
MS941-03 Type J-2