

THERMX® CG933

PCT

Thermx® CG933 is a 30% glass fiber reinforced and flame retardant polycyclohexylenedimethylene terephthalate for injection molding.

Product information

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

Rheological properties

Moulding shrinkage, parallel	0.3 %	ISO 294-4, 2577
Moulding shrinkage, normal	0.8 %	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	10800 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	114 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.5 %	ISO 527-1/-2
Flexural modulus	10000 MPa	ISO 178
Flexural strength	170 MPa	ISO 178
Charpy impact strength, 23°C	30 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	6 kJ/m ²	ISO 179/1eA
Hardness, Rockwell, M-scale	119	ISO 2039-2
Poisson's ratio	0.34 ^[C]	

[C]: Calculated

Thermal properties

Melting temperature, 10°C/min	285 °C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	250 °C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	270 °C	ISO 75-1/-2
Ball pressure test	240 °C	IEC 60695-10-2
Coefficient of linear thermal expansion (CLTE), parallel	6 E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	100 E-6/K	ISO 11359-1/-2

Flammability

Burning Behav. at 1.5mm nom. thickn.	V-0 class	IEC 60695-11-10
Thickness tested	1.5 mm	IEC 60695-11-10
Burning Behav. at thickness h	V-2 class	IEC 60695-11-10
Thickness tested	0.8 mm	IEC 60695-11-10
UL recognition	yes	UL 94
Glow Wire Flammability Index, 1.0mm	850 ^[OT] °C	IEC 60695-2-12
Glow Wire Flammability Index, 2.0mm	960 ^[OT] °C	IEC 60695-2-12
Glow Wire Ignition Temperature, 1.0mm	725 ^[OT] °C	IEC 60695-2-13
Glow Wire Ignition Temperature, 2.0mm	725 ^[OT] °C	IEC 60695-2-13

[OT]: One time tested

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Electrical properties

Electric strength	33 ^[OT] kV/mm	IEC 60243-1
Comparative tracking index	440	IEC 60112
[OT]: One time tested		

Physical/Other properties

Humidity absorption, 2mm	0.15 %	Sim. to ISO 62
Water absorption, 2mm	0.9 %	Sim. to ISO 62
Density	1630 kg/m ³	ISO 1183
Bulk density	690 kg/m ³	ISO 60

Injection

Ejection temperature	242 °C
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Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Special characteristics	Flame retardant, 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 %

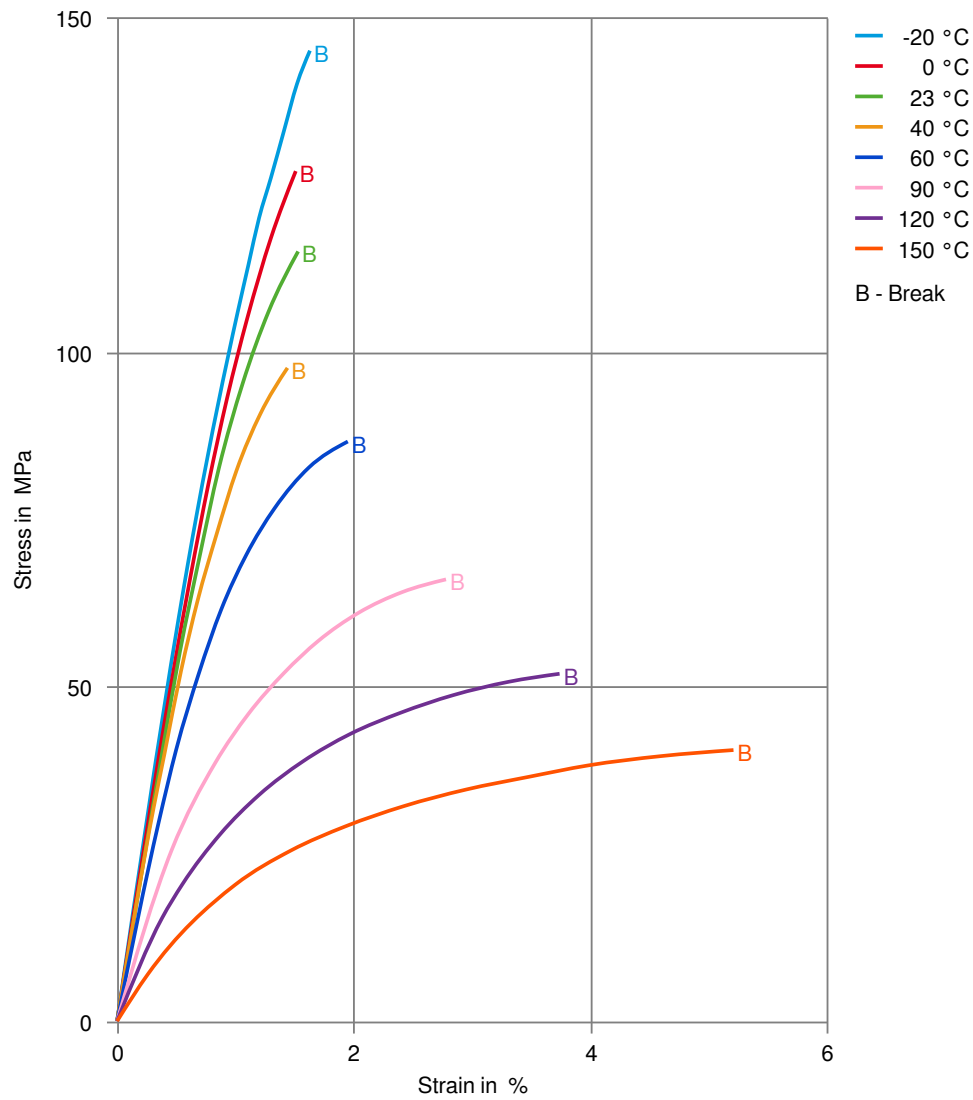
Processing

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

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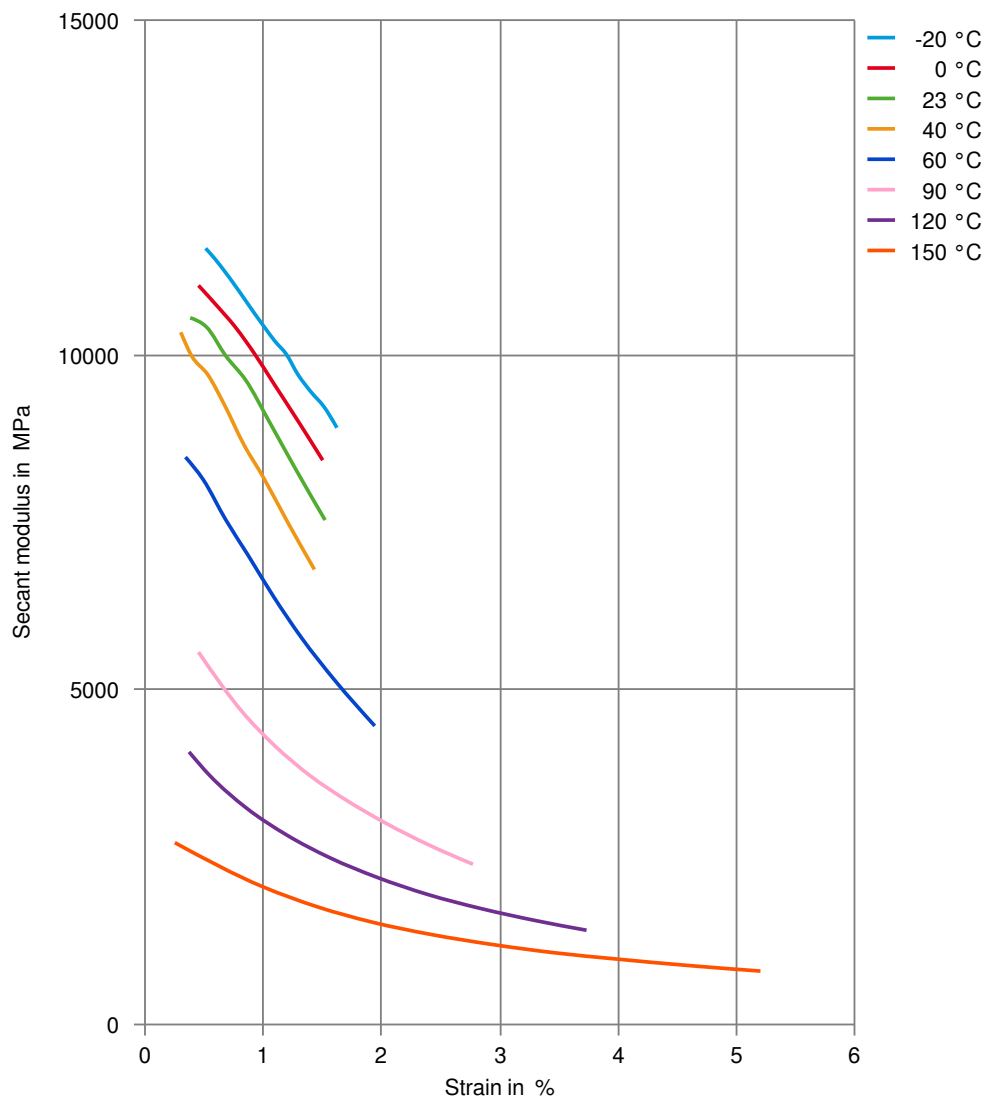
Stress-strain



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Secant modulus-strain



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