

THERMX® CG933

30% glass reinforced, flame retardant

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

Rheological properties

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

Typical mechanical properties

Tensile Modulus	10800 MPa	ISO 527-1/-2
Stress at break, 5mm/min	114 MPa	ISO 527-1/-2
Strain at break, 5mm/min	1.5 %	ISO 527-1/-2
Flexural Modulus	10000 MPa	ISO 178
Flexural Strength	172 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

Thermal properties

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

Flammability

Burning Behav. at 1.5mm nom. thickn.	V-0 class	UL 94
Thickness tested	1.5 mm	UL 94
Burning Behav. at thickness h	V-2 class	UL 94
Thickness tested	0.80 mm	UL 94
UL recognition	yes	UL 94
Glow Wire Flammability Index, 1mm	850 °C	IEC 60695-2-12
Glow Wire Flammability Index, 2mm	960 °C	IEC 60695-2-12
Glow Wire Ignition Temperature, 1mm	725 °C	IEC 60695-2-13
Glow Wire Ignition Temperature, 2mm	725 °C	IEC 60695-2-13

Electrical properties

Electric strength	33 kV/mm	IEC 60243-1
Comparative tracking index	PLC 1 PLC	UL 746A



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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

Drying Temperature	≥95 °C	
Drying Time, Dehumidified Dryer	4 - 6 h	
Processing Moisture Content	0.03 %	
Melt Temperature Optimum	300 °C	Internal
Max. mould temperature	80 - 120 °C	

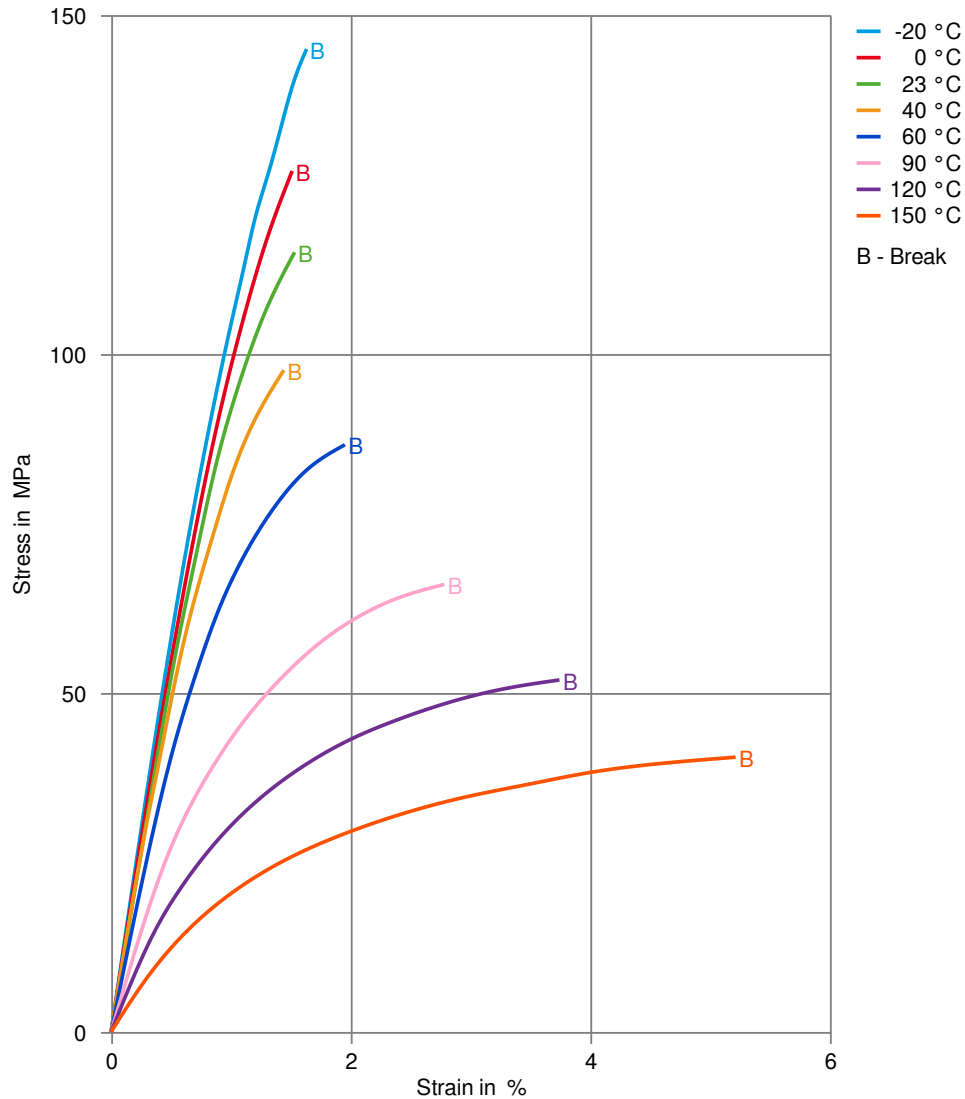
Additional information

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



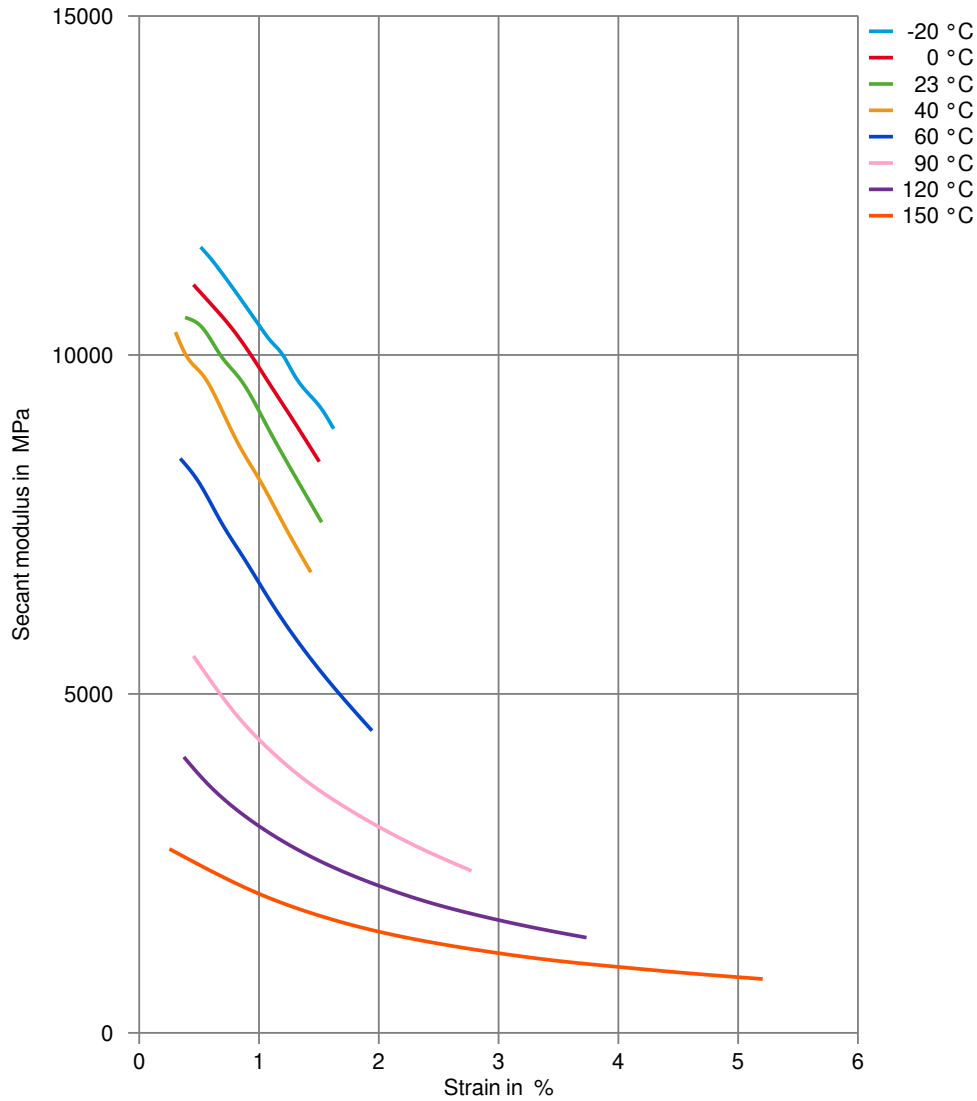
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Stress-strain



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Secant modulus-strain



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Processing Texts

Injection molding

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

Injection molding Preprocessing

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

