Celanese
The chemistry inside innovation™

CELANEX® 3202-2LM

20% glass-fiber reinforced; lubricated; high flow PBT grade; enhanced for improved laser marking
Celanex 3202-2LM is a 20% glass-fiber PBT that is enhanced for improved laser marking graphics. It also has has an excellent balance of mechanical properties and processability. It contains an internal lubricant for mold release.

Product information

Part Marking Code	PBT-GF20		ISO 11469

Rheological properties

Melt mass-flow rate	22	g/10min	ISO 1133
Melt mass-flow rate, Temperature	250	°C	
Melt mass-flow rate, Load	2.16	kg	
Moulding shrinkage range, parallel	0.4 - 0.8	%	ISO 294-4, 2577

Typical mechanical properties

Stress at break, 5mm/min	112	MPa	ISO 527-1/-2
Strain at break, 5mm/min	3.1	%	ISO 527-1/-2
Flexural Modulus	6800	MPa	ISO 178
Flexural Strength	180	MPa	ISO 178
Izod notched impact strength, 23°C	7	kJ/m²	ISO 180/1A

Thermal properties

Melting temperature, 10°C/min	225	°C	ISO 11357-1/-3

Other properties

Humidity absorption, 2mm	0.1	%	Sim. to ISO 62
Density	1450	kg/m³	ISO 1183

Injection

Drying Temperature	120 - 130	°C
Drying Time, Dehumidified Dryer	4	h
Processing Moisture Content	0.02	%
Max. mould temperature	65 - 93	°C
Back pressure		MPa
Injection speed	medium-fast	

Additional information

Injection molding	Injection speed, injection pressure and holding pressure have to be optimized to the individual article geometry. To avoid material degradation during processing low back pressure and minimum screw speed have to be used. Overheating of the material has to be avoided, in particular for flame retardant grades. Up to 25% clean and dry regrind may be used.

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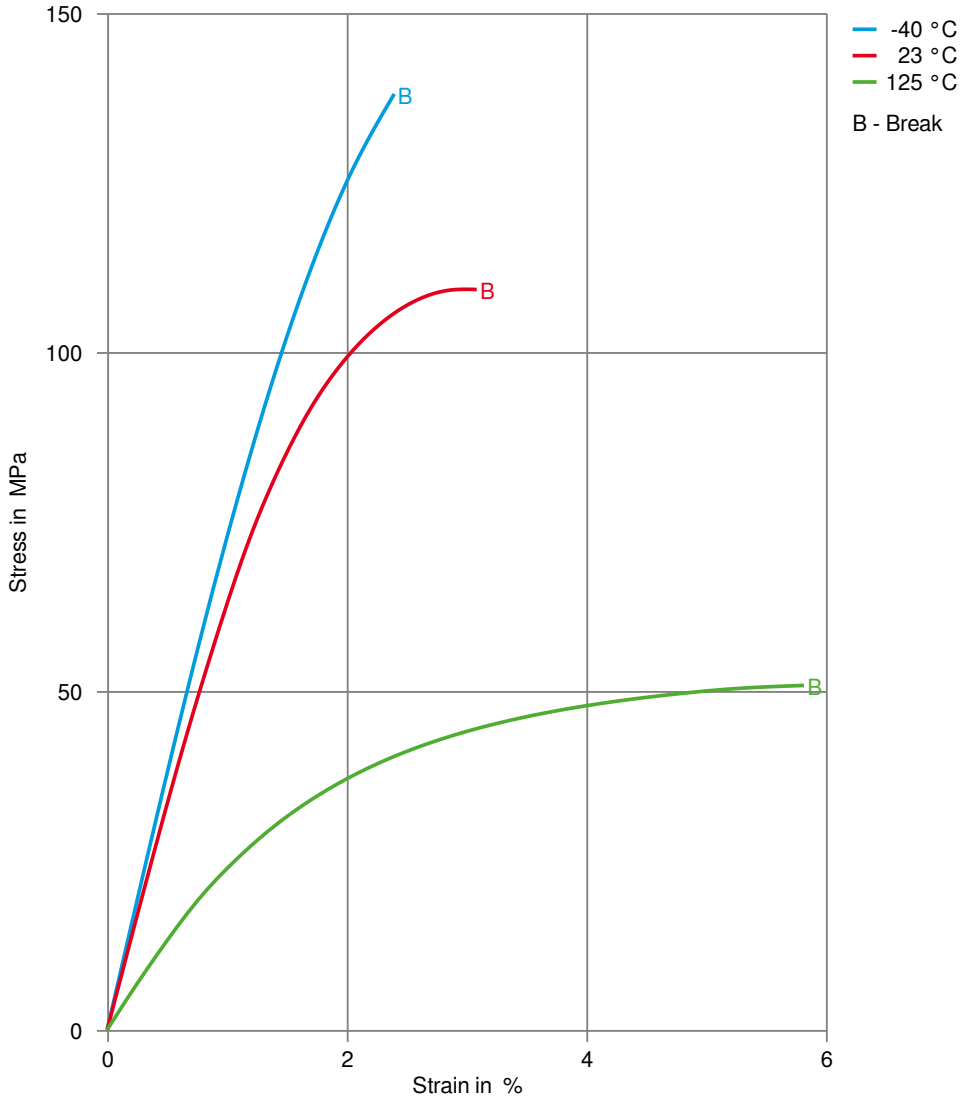
Stress-strain



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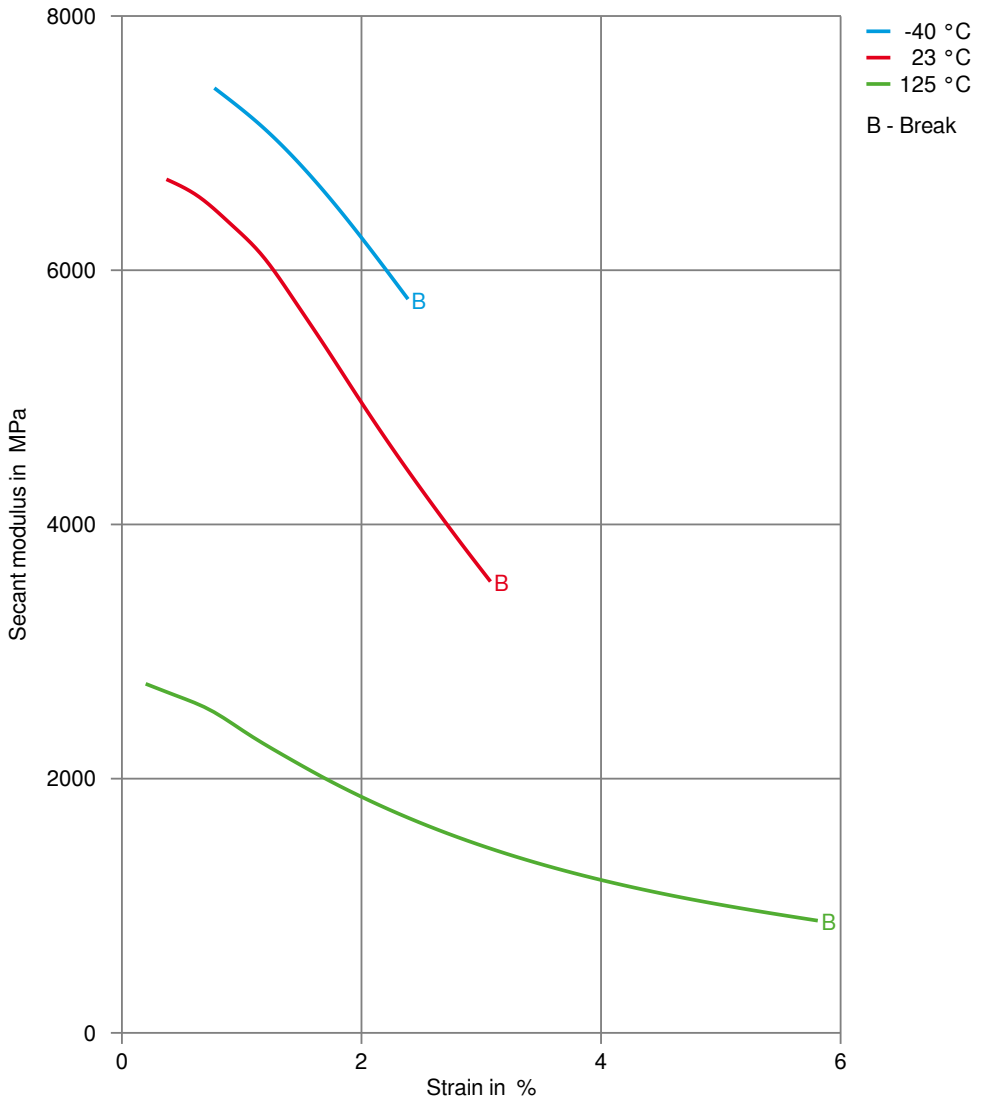
Secant modulus-strain



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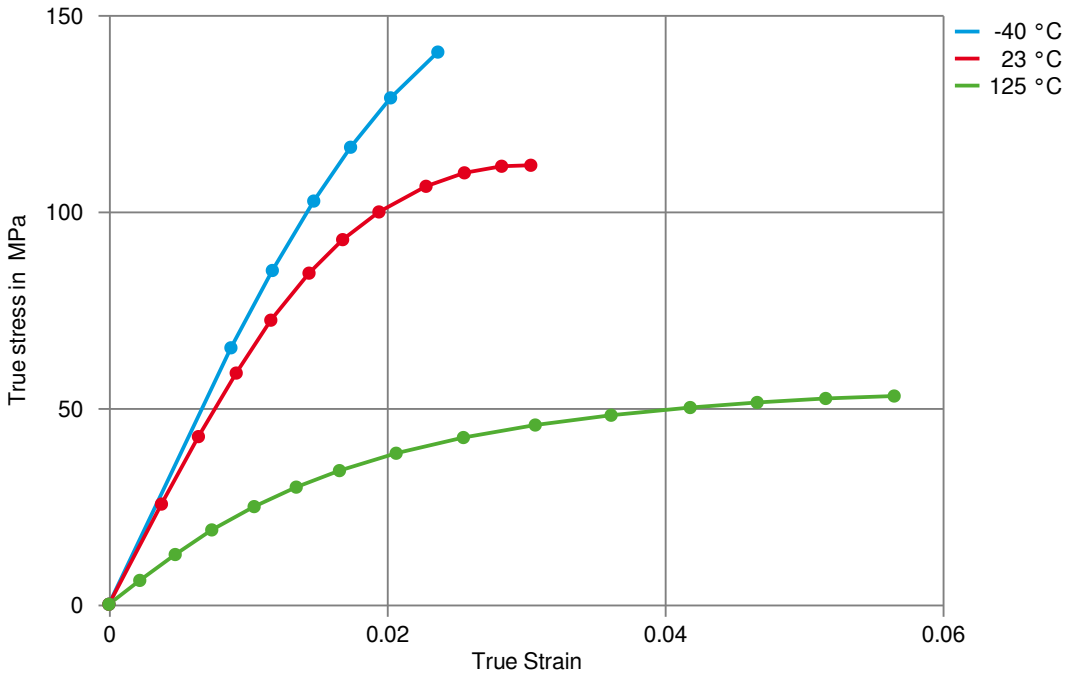
True stress-strain



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Processing Texts

Pre-drying	To avoid hydrolytic degradation during processing, CELANEX resins have to be dried to a moisture level equal to or less than 0.02%. Drying should be done in a dehumidifying hopper dryer capable of dewpoints <-30°F (-34°C) at 250°F (121°C) for 4 hours.
Longer pre-drying times/storage	For subsequent storage of the material in the dryer untill processed (<= 60 h) it is necessary to lower the temperature to 100 °C.
Injection molding	Injection speed, injection pressure and holding pressure have to be optimized to the individual article geometry. To avoid material degradation during processing low back pressure and minimum screw speed have to be used. Overheating of the material has to be avoided, in particular for flame retardant grades. Up to 25% clean and dry regrind may be used.