

CELANEX® 6500

30% glass-fiber / mineral filled PBT+PET blend, low warpage grade

Celanex 6500 is a 30% glass/mineral polyester with improved surface finish and a good balance of mechanical properties and processability.

Product information

Part Marking Code	> (PBT+PET)-(GF+MD)30 <	ISO 11469
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Rheological properties

Melt mass-flow rate	22 g/10min	ISO 1133
Melt mass-flow rate, Temperature	265 °C	
Melt mass-flow rate, Load	2.16 kg	
Moulding shrinkage range, parallel	0 - 0.5 %	ISO 294-4, 2577
Moulding shrinkage range, normal	0.5 - 0.8 %	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	9700 MPa	ISO 527-1/-2
Stress at break, 5mm/min	125 MPa	ISO 527-1/-2
Strain at break, 5mm/min	2.2 %	ISO 527-1/-2
Flexural Modulus	9500 MPa	ISO 178
Flexural Strength	180 MPa	ISO 178
Charpy impact strength, 23°C	30 kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	30 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	7.1 kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	6.4 kJ/m ²	ISO 179/1eA
Izod notched impact strength, 23°C	5.3 kJ/m ²	ISO 180/1A
Izod impact strength, 23°C	31 kJ/m ²	ISO 180/1U
Hardness, Rockwell, M-scale	89	ISO 2039-2
Shore D hardness, 15s	85	ISO 48-4 / ISO 868

Thermal properties

Melting temperature, 10°C/min	225 °C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	54 °C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	202 °C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	223 °C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	28 E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	85 E-6/K	ISO 11359-1/-2

Electrical properties

Relative permittivity, 100Hz	3.5	IEC 62631-2-1
Relative permittivity, 1MHz	3.8	IEC 62631-2-1
Dissipation factor, 1MHz	400 E-4	IEC 62631-2-1
Volume resistivity	2E14 Ohm.m	IEC 62631-3-1
Surface resistivity	3E16 Ohm	IEC 62631-3-2

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Electric strength	22 kV/mm	IEC 60243-1
Comparative tracking index	PLC 2 PLC	UL 746A

Other properties

Humidity absorption, 2mm	0.19 %	Sim. to ISO 62
Water absorption, 2mm	0.4 %	Sim. to ISO 62
Density	1550 kg/m ³	ISO 1183

Injection

Drying Temperature	120 - 130 °C	
Drying Time, Dehumidified Dryer	4 h	
Processing Moisture Content	0.02 %	
Melt Temperature Optimum	270 °C	Internal
Max. mould temperature	65 - 96 °C	
Injection speed	medium-fast	

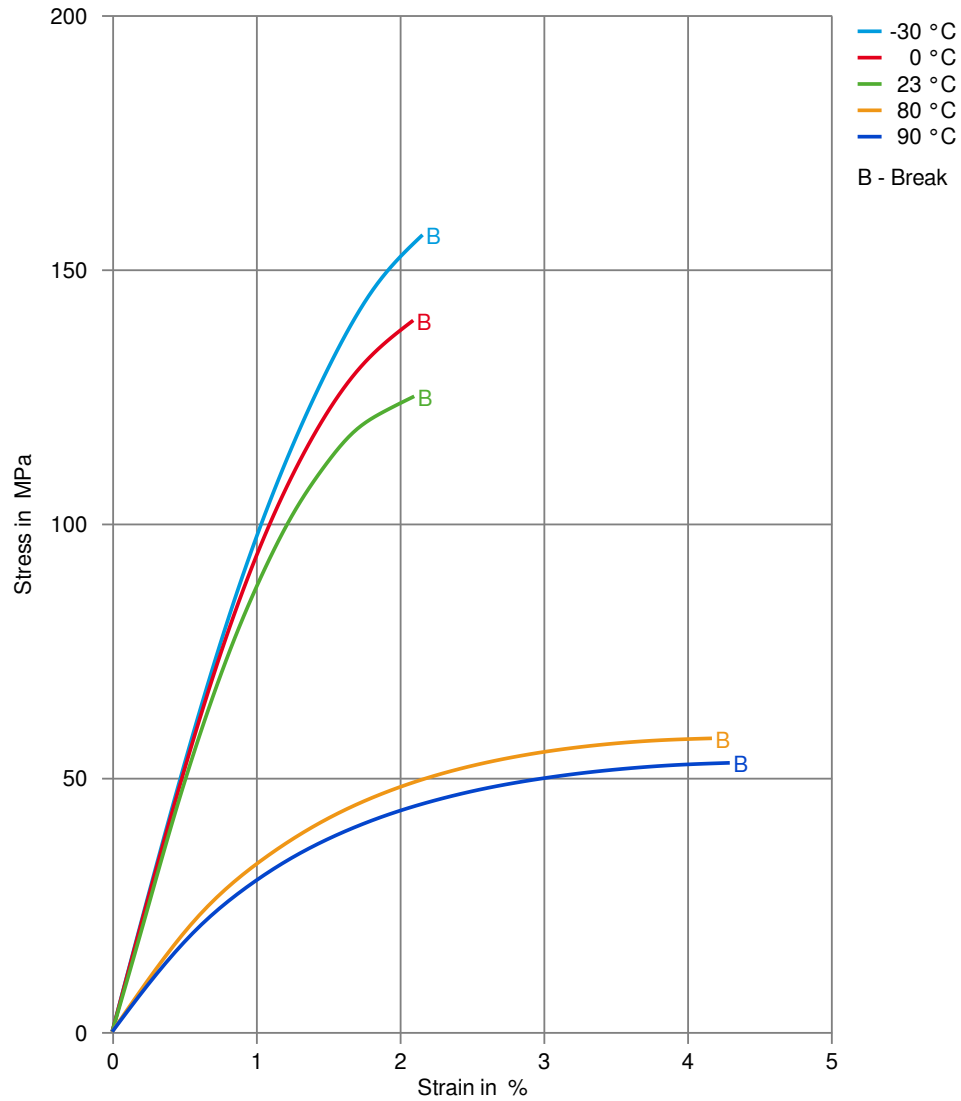
Additional information

Injection molding	Rear Temperature 450-480 (230-250) deg F (deg C)
	Center Temperature 460-490(235-255) deg F (deg C)
	Front Temperature 470-500 (240-260) deg F (deg C)
	Nozzle Temperature 480-510 (250-265) deg F (deg C)
	Melt Temperature 460-510 (235-265) deg F (deg C)
	Mold Temperature 150-200(65-93) deg F (deg C)
	Back Pressure 0-50 psi
	Screw Speed Medium
	Injection Speed Fast

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.

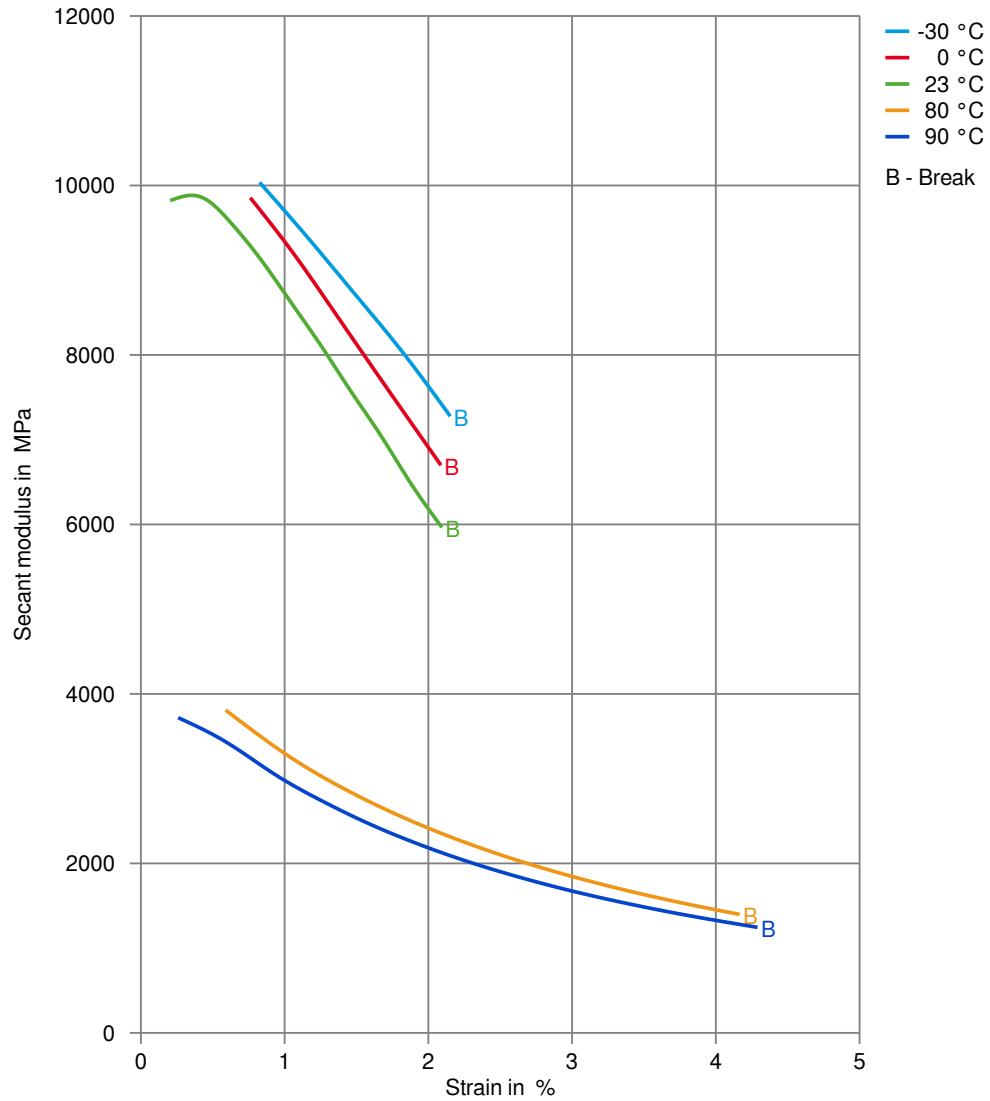
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Stress-strain



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Secant modulus-strain



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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 <-40°F (-40°C) at 250°F (121°C) for 4 hours.

Longer pre-drying times/storage

For subsequent storage of the material in the dryer until processed (<= 60 h) it is necessary to lower the temperature to 100° C.

Injection molding

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Injection molding Preprocessing

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 minimum 4 hours.

Other Approvals

Other Approvals

OEM	Specification	Additional Information
Stellantis - Chrysler	CPN 3763	100% color match
Stellantis - Chrysler	CPN 3764	CANOD
Ford	WSB-M4D921-A	
GM	GMW16873P-PBT+PET-M5GF25	