

CELANEX® 3316HR

30% glass-fiber reinforced, hydrolysis resistant, flame retardant (UL94 V-0) grade
 Celanex 3316HR is a flame retarded, hydrolysis resistant, 30% fiberglass reinforced polybutylene terephthalate which has an excellent balance of mechanical properties and processability.

Product information

Part Marking Code	> PBT-I-GF30 FR(17) <	ISO 11469
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Rheological properties

Melt mass-flow rate	6 g/10min	ISO 1133
Melt mass-flow rate, Temperature	250 °C	
Melt mass-flow rate, Load	2.16 kg	
Moulding shrinkage range, parallel	0.3 - 0.5 %	ISO 294-4, 2577
Moulding shrinkage range, normal	0.8 - 1.1 %	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	9850 MPa	ISO 527-1/-2
Stress at break, 5mm/min	115 MPa	ISO 527-1/-2
Strain at break, 5mm/min	2.5 %	ISO 527-1/-2
Flexural Modulus	8950 MPa	ISO 178
Flexural Strength	175 MPa	ISO 178
Charpy notched impact strength, 23°C	8.5 kJ/m²	ISO 179/1eA

Thermal properties

Melting temperature, 10°C/min	225 °C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	202 °C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	25 E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	90 E-6/K	ISO 11359-1/-2

Flammability

Burning Behav. at thickness h	V-0 class	UL 94
Thickness tested	0.75 mm	UL 94
Burning Behav. 5V at thickness h	5VA class	UL 94
Thickness tested	1.5 mm	UL 94
UL recognition	yes	UL 94
Glow Wire Flammability Index, 3mm	960 °C	IEC 60695-2-12
Glow Wire Ignition Temperature, 3mm	750 °C	IEC 60695-2-13

Electrical properties

Relative permittivity, 1MHz	2.9	IEC 62631-2-1
Dissipation factor, 1MHz	145 E-4	IEC 62631-2-1
Volume resistivity	>1E13 Ohm.m	IEC 62631-3-1
Surface resistivity	>1E15 Ohm	IEC 62631-3-2
Comparative tracking index	PLC 2 PLC	UL 746A



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Other properties

Humidity absorption, 2mm	0.2 %	Sim. to ISO 62
Density	1640 kg/m ³	ISO 1183

VDA Properties

Emission of organic compounds	15 µgC/g	VDA 277
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Injection

Drying Temperature	120 - 130 °C	
Drying Time, Dehumidified Dryer	4 h	
Processing Moisture Content	0.02 %	
Melt Temperature Optimum	250 °C	Internal
Max. mould temperature	65 - 96 °C	
Injection speed	medium-fast	

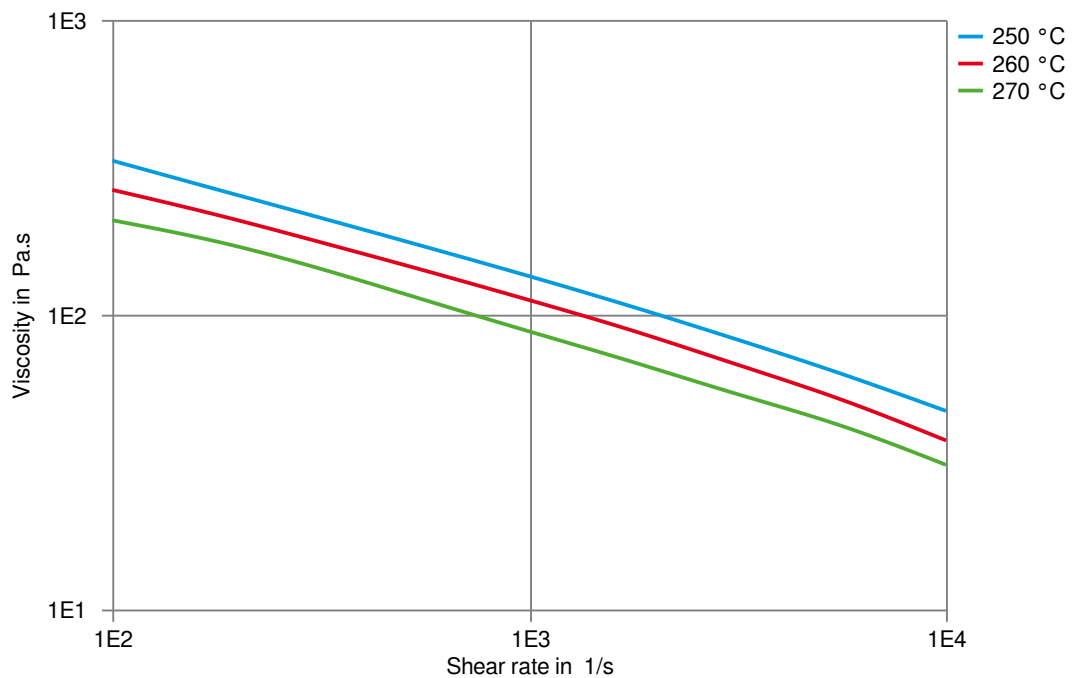
Characteristics

Additives	Release agent, Flame retardant
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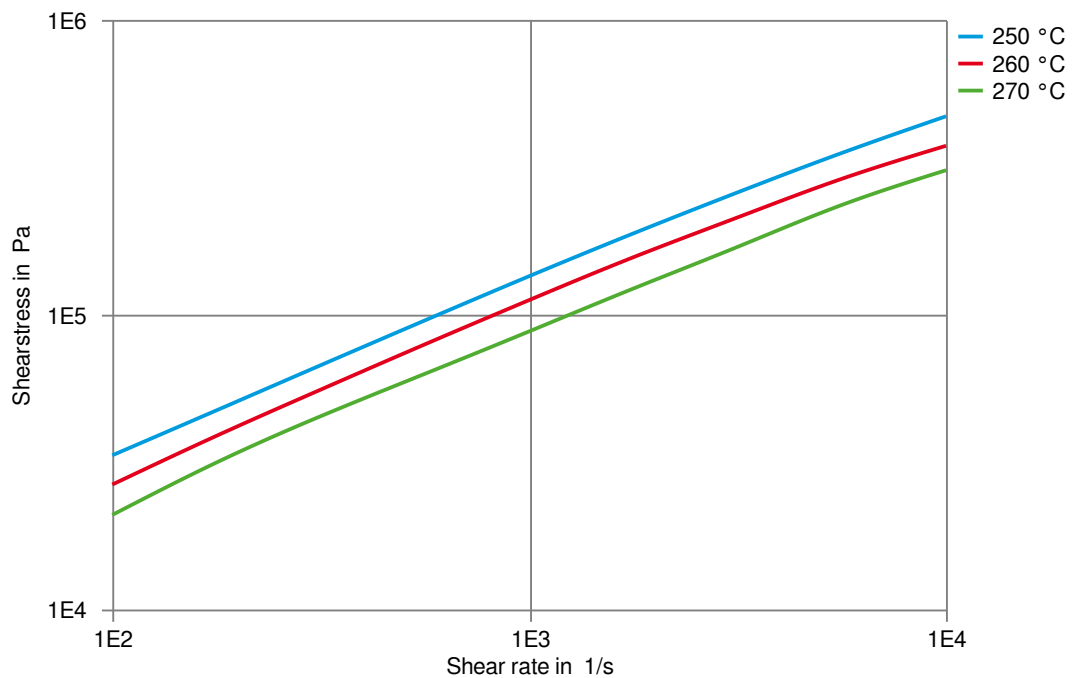
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Viscosity-shear rate



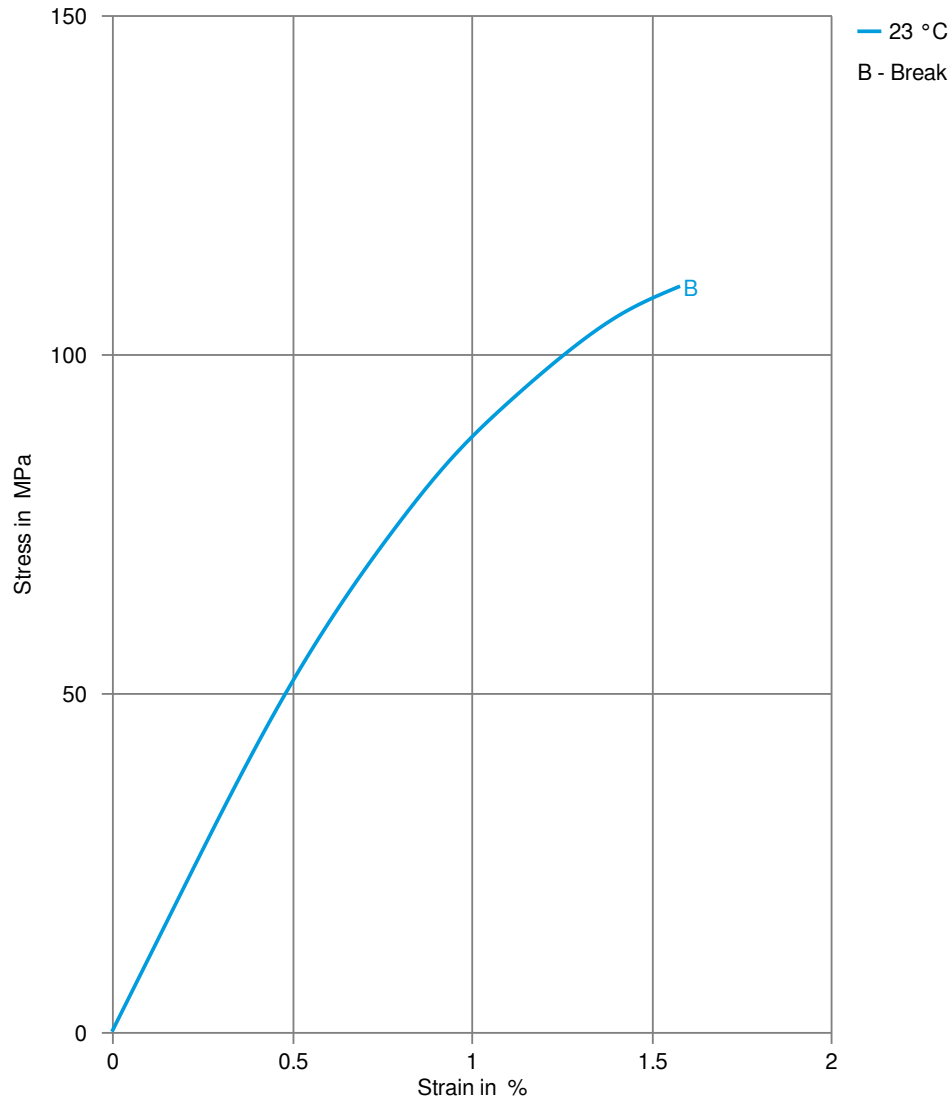
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Shearstress-shear rate



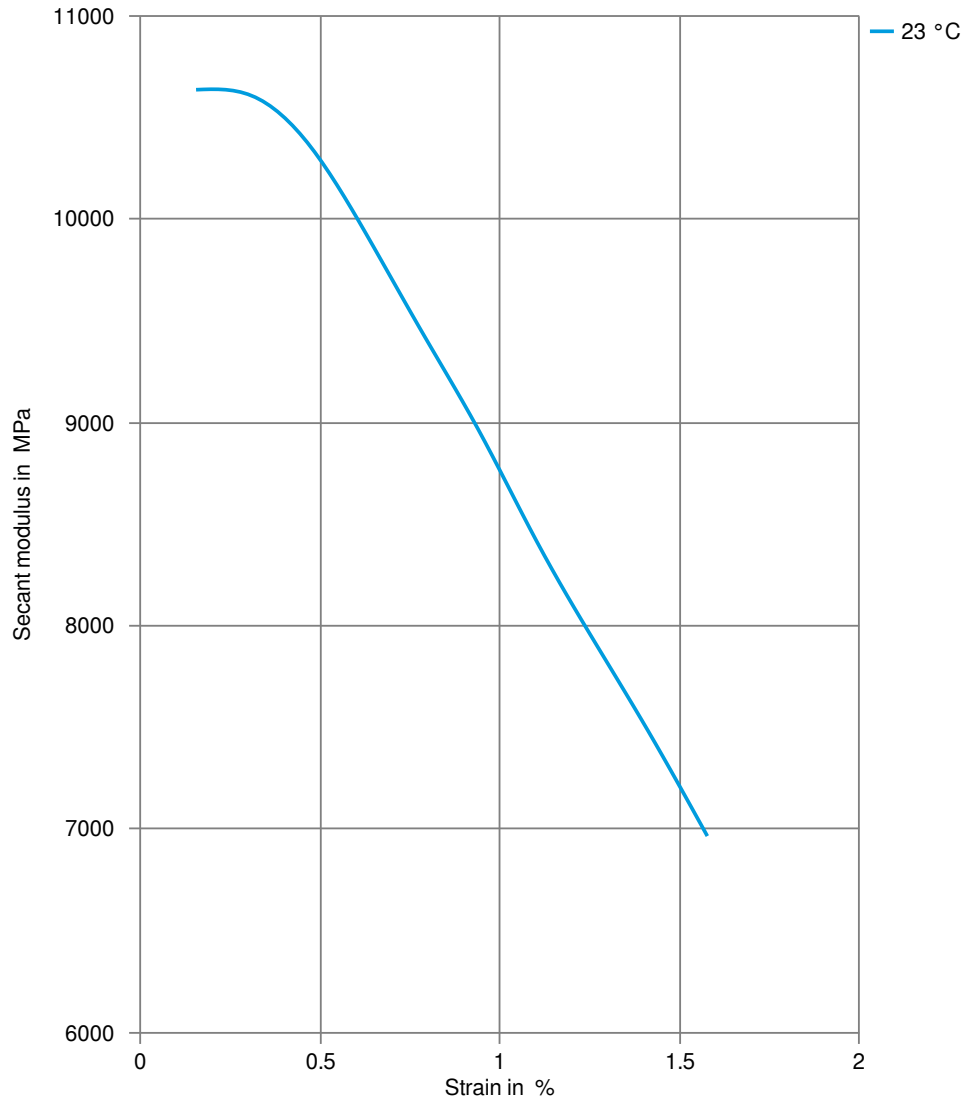
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Stress-strain



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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.

Other Approvals

Other Approvals

OEM	Specification	Additional Information
Li Auto	Q/LiA5310038	2021 (V2)
Stellantis - PSA Group	PMP E&E	
Renault	UB22c	
Renault	UB22d	
Renault	UB22e	

