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CELANEX® 3316HR

CELANEX® PBT

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

Resin Identification	PBT-I-GF30 FR(17)	ISO 1043
Part Marking Code	>PBT-I-GF30 FR(17)<	ISO 11469

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
Tensile stress at break, 5mm/min	115	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.5	%	ISO 527-1/-2
Flexural modulus	8950	MPa	ISO 178
Flexural strength	180	MPa	ISO 178
Charpy notched impact strength, 23°C	8.5	kJ/m²	ISO 179/1eA
Poisson's ratio	0.34[C]		

[C]: Calculated

Thermal properties

Melting temperature, 10°C/min	225	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	202	°C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	25	E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	90	E-6/K	ISO 11359-1/-2

Flammability

Burning Behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.75	mm	IEC 60695-11-10
Burning Behav. 5V at thickness h	5VA	class	IEC 60695-11-20
Thickness tested	1.5	mm	IEC 60695-11-20
UL recognition	yes		UL 94
Glow Wire Flammability Index, 3.0mm	960	°C	IEC 60695-2-12
Glow Wire Ignition Temperature, 3.0mm	750	°C	IEC 60695-2-13
FMVSS Class	DNI		ISO 3795 (FMVSS 302)

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	250		IEC 60112

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Physical/Other properties

Humidity absorption, 2mm	0.2	%	Sim. to ISO 62
Water absorption, Immersion 24h	0.05	%	Sim. to ISO 62
Density	1640	kg/m³	ISO 1183

VDA Properties

Emission of organic compounds	15	µgC/g	VDA 277

Injection

Drying Recommended	yes	
Drying Temperature	120	°C
Drying Time, Dehumidified Dryer	4	h
Processing Moisture Content	≤0.02	%
Melt Temperature Optimum	250	°C
Min. melt temperature	240	°C
Max. melt temperature	260	°C
Screw tangential speed	0.1 - 0.3	m/s
Mold Temperature Optimum	80	°C
Min. mould temperature	60	°C
Max. mould temperature	130	°C
Ejection temperature	191	°C

Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Additives	Release agent, Flame retardant
Special characteristics	Flame retardant, Hydrolysis resistant

Additional information

Processing Notes

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.

Storage

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

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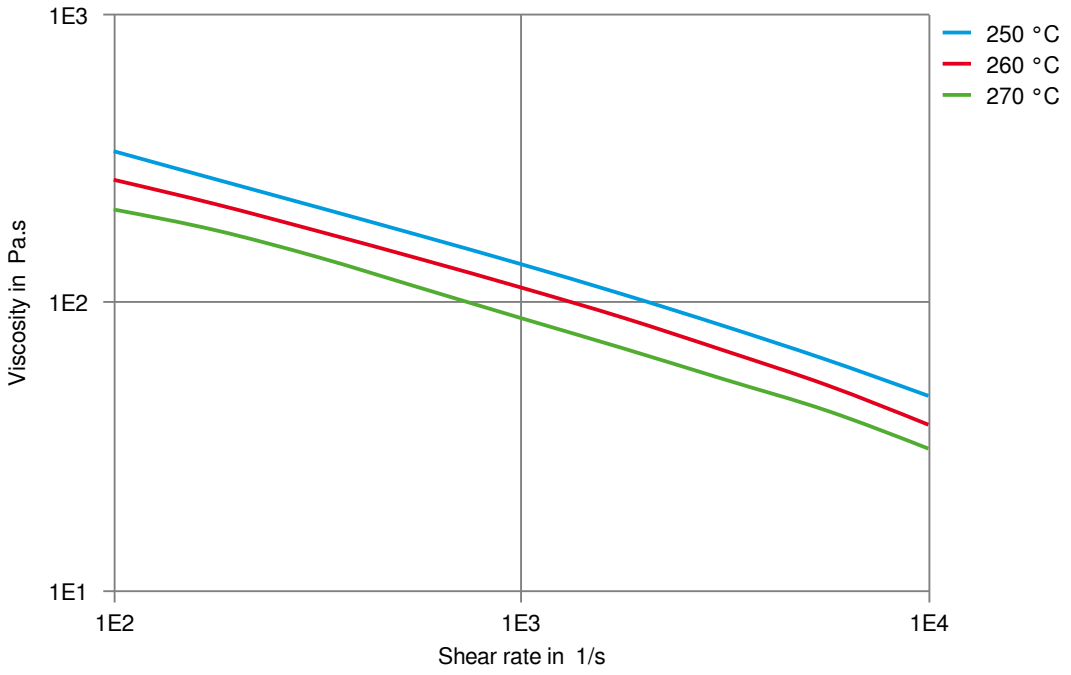
Automotive

OEM	STANDARD	ADDITIONAL INFORMATION
Li Auto	Q/LiA5310038	2021 (V2)
Renault	UB22c, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault	UB22d, No Spec, Special Part Approval, See Your CE Account Manager.	
Renault	UB22e, No Spec, Special Part Approval, See Your CE Account Manager.	
Stellantis	B62 0300 / 61/219E/215M/C4	01378_20_00624

Viscosity-shear rate



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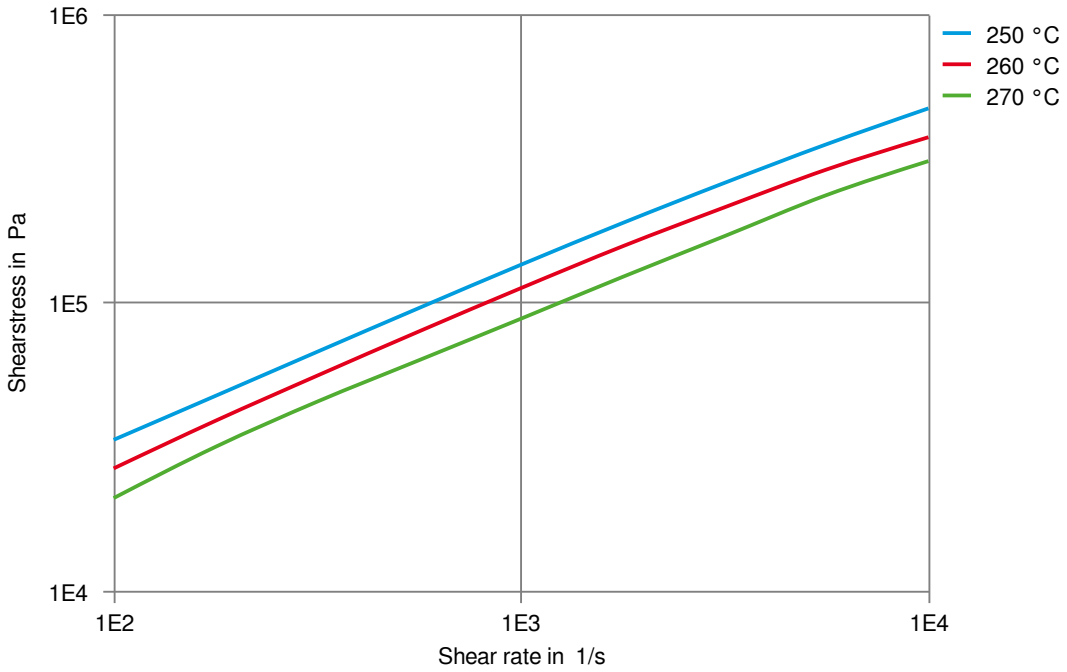
Shearstress-shear rate



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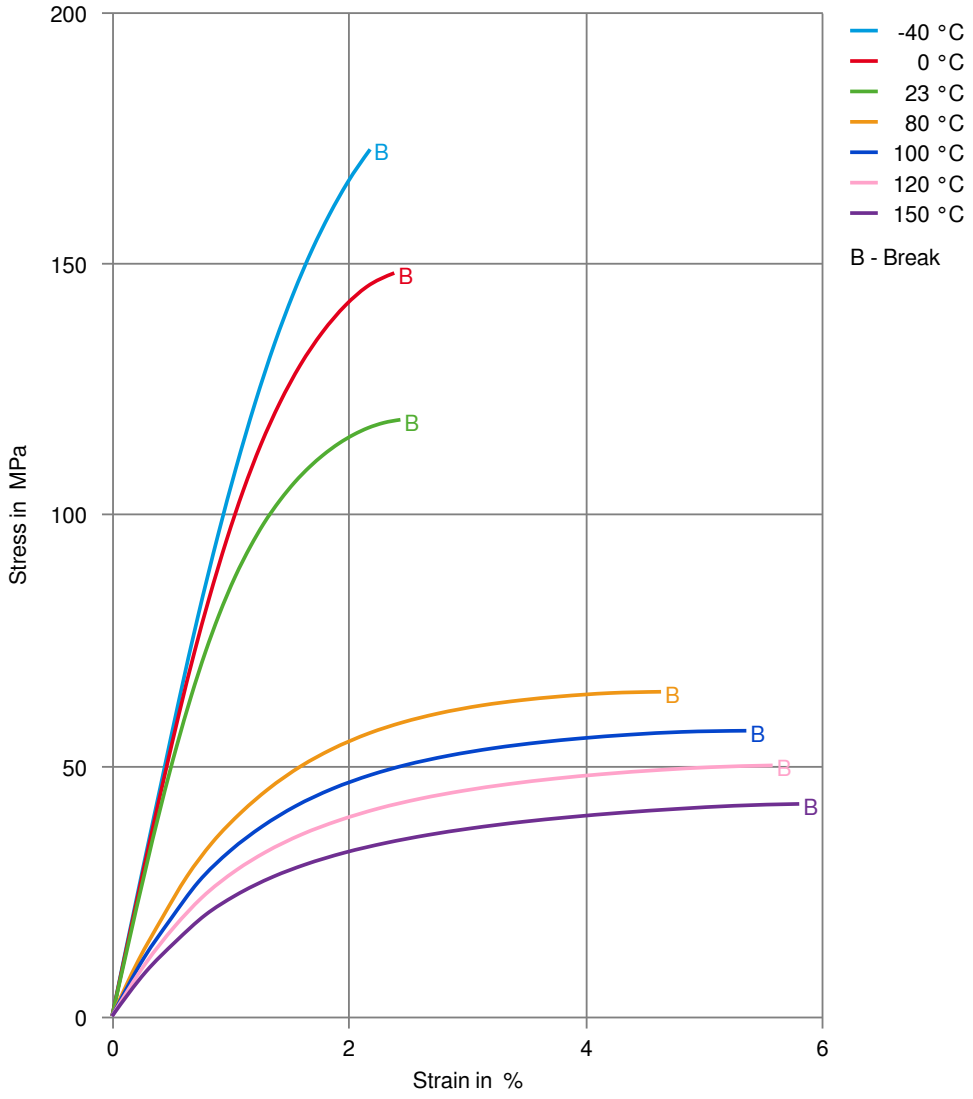
Stress-strain



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Secant modulus-strain