

# FORTRON® 4332L6

Fortron 4332L6 is a glass fiber/mineral filled injection molding grade material.

Fortron 4332L6 is a glass fiber/mineral filled injection molding grade, which is intended for applications requiring improved tensile and flexural properties, when compared to other GF/MIN reinforced PPS grades. The recommended processing parameters are similar to the standard grades.

## Rheological properties

Moulding shrinkage range, parallel	0.2 - 0.6 %	ISO 294-4, 2577
Moulding shrinkage range, normal	0.3 - 0.7 %	ISO 294-4, 2577

## Typical mechanical properties

Tensile Modulus	22500 MPa	ISO 527-1/-2
Stress at break, 5mm/min	160 MPa	ISO 527-1/-2
Strain at break, 5mm/min	1.2 %	ISO 527-1/-2
Flexural Modulus	21000 MPa	ISO 178
Flexural Strength	260 MPa	ISO 178
Charpy impact strength, 23°C	30 kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C	6.5 kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	6.1 kJ/m <sup>2</sup>	ISO 179/1eA
Poisson's ratio	0.309	

## Thermal properties

Melting temperature, 10°C/min	280 °C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	90 °C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	270 °C	ISO 75-1/-2
Temp. of deflection under load, 8 MPa	220 °C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	12 E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	45 E-6/K	ISO 11359-1/-2
Thermal conductivity in plane, in flow	0.63 W/(m K)	ASTM E 1461
Thermal conductivity in plane, cross flow	0.58 W/(m K)	ASTM E 1461
Thermal conductivity through plane	0.6 W/(m K)	ASTM E 1461

## Flammability

Burning Behav. at 1.5mm nom. thickn.	V-0 class	UL 94
Burning rate, Thickness 1 mm	SE/0 mm/min	ISO 3795 (FMVSS 302)

## Electrical properties

Comparative tracking index	PLC 4 PLC	UL 746A
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## Other properties

Water absorption, 2mm	0.02 %	Sim. to ISO 62
Density	1950 kg/m <sup>3</sup>	ISO 1183

## Injection

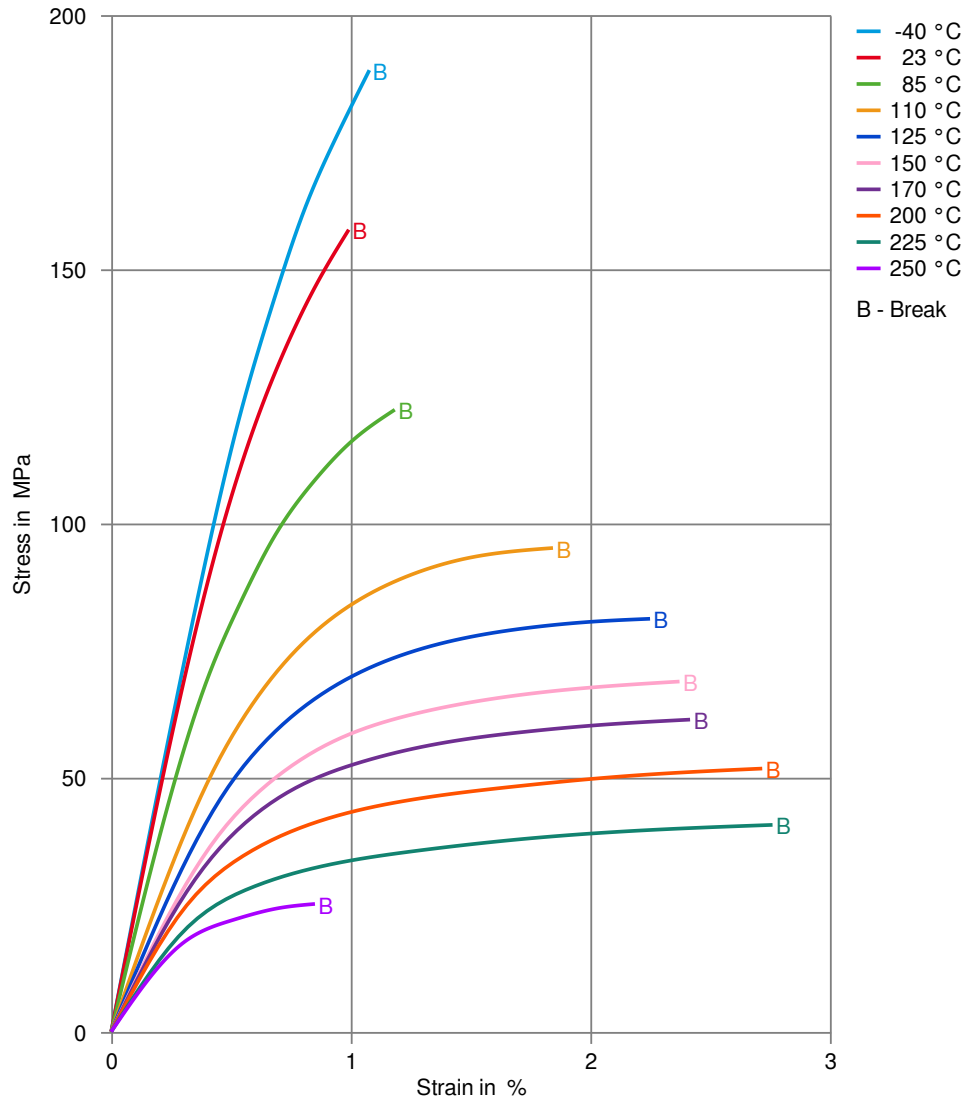
Drying Temperature	130 - 140 °C	
Drying Time, Dehumidified Dryer	3 - 4 h	
Processing Moisture Content	0.02 %	
Melt Temperature Optimum	335 °C	Internal
Screw tangential speed	0.14 - 0.16 m/s	
Max. mould temperature	140 - 160 °C	
Back pressure	3 MPa	
Injection speed	fast	

## Additional information

Injection molding	<p>On injection molding machines with 15-25 D long three-section screws, as are usual in the trade, the FORTRON is processable. A shut-off nozzle is preferred to a free-flow nozzle.</p> <p>Melt temperature 320-340 degC          Mold wall temperature at least 140 degC</p> <p>A medium injection rate is normally preferred. All mold cavities must be effectively vented.</p>
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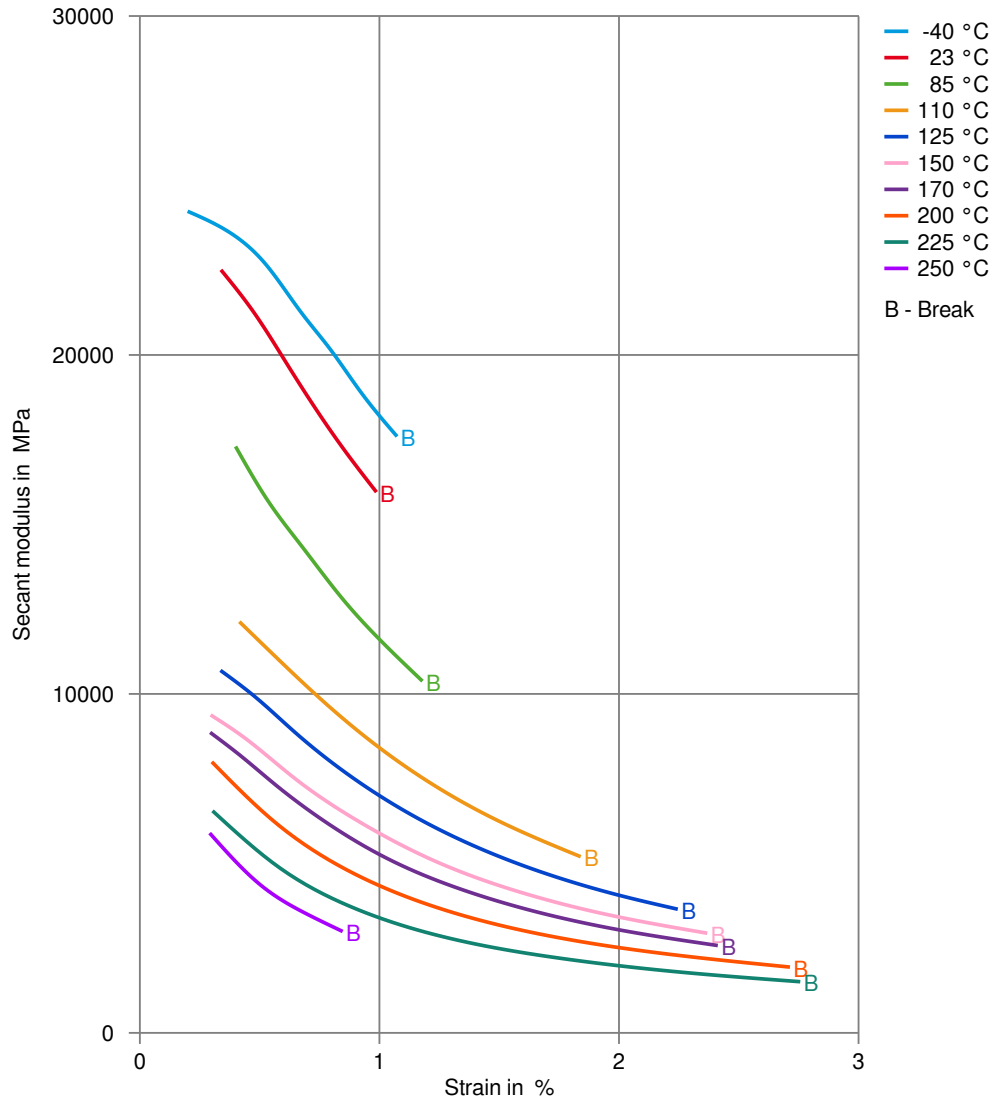
# FORTRON® 4332L6

## Stress-strain



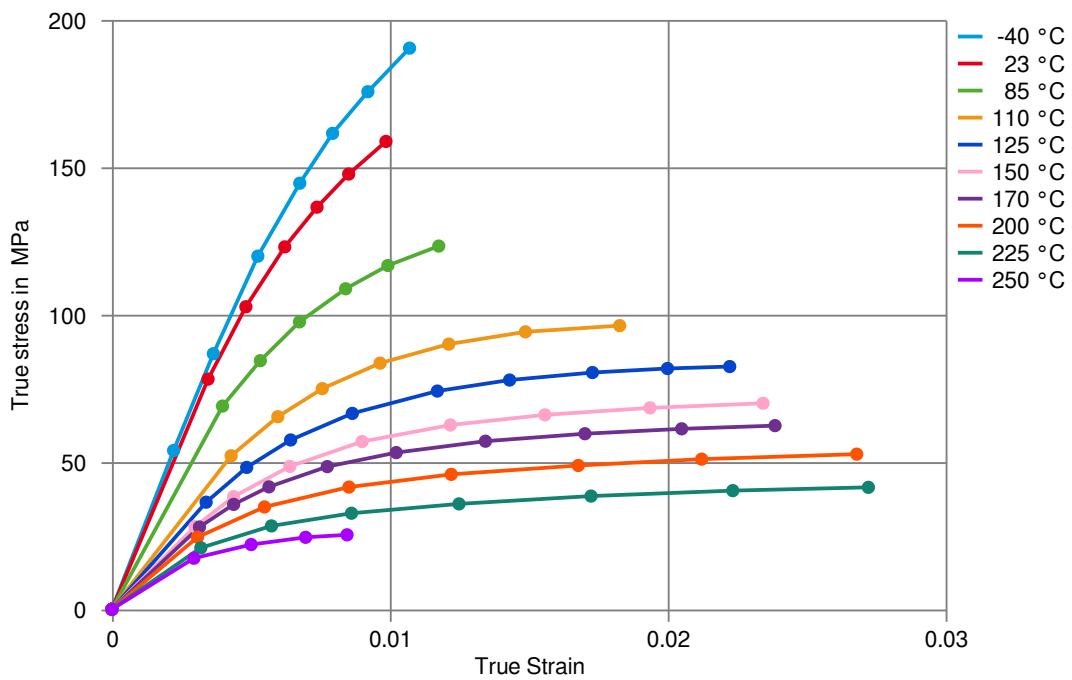
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## Secant modulus-strain



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## True stress-strain



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## Processing Texts

Injection molding	On injection molding machines with 15-25 D long three-section screws, as are usual in the trade, the FORTRON is processable. A shut-off nozzle is preferred to a free-flow nozzle.
	Melt temperature 320-340 degC Mold wall temperature at least 140 degC
	A medium injection rate is normally preferred. All mold cavities must be effectively vented.
Injection molding Preprocessing	Predrying in a dehumidified air dryer at 130 - 140 degC/3-4 hours is recommended.
Injection molding Postprocessing	Tool temperature of at least 135 degC is recommended for parts to achieve maximum crystallizable potential.

## Other Approvals

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OEM	Specification	Additional Information
BMW	GS 93016	SD3002 Black
GM	GMW17519P-PPS-GF45MD20	Natural & Black