

FORTRON® 4332L6

Polyphenylene sulfide

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.

Product information

Resin Identification	PPS-(GF+MD)6	ISO 1043
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Part Marking Code	>PPS-(GF+MD)65<	ISO 11469

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
Tensile stress at break, 5mm/min	160 MPa	ISO 527-1/-2
Tensile 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 ²	ISO 179/1eU
Charpy notched impact strength, 23°C	6.5 kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	6.1 kJ/m ²	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
Temperature of deflection under load, 1.8 MPa	270 °C	ISO 75-1/-2
Temperature of deflection under load, 8 MPa	220 °C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	12 E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	45 E-6/K	ISO 11359-1/-2
Thermal conductivity, flow	0.63 ^[OT] W/(m K)	ISO 22007-2
Thermal conductivity, crossflow	0.58 ^[OT] W/(m K)	ISO 22007-2
Thermal conductivity, through plane	0.6 ^[OT] W/(m K)	ISO 22007-2
Effective thermal diffusivity, flow	3.6E-7 ^[OT] m ² /s	ISO 22007-4
Effective thermal diffusivity, crossflow	3.3E-7 ^[OT] m ² /s	ISO 22007-4
Effective thermal diffusivity, through plane	3.4E-7 ^[OT] m ² /s	ISO 22007-4
Specific heat capacity of melt	890 ^[OT] J/(kg K)	ISO 22007-4

[OT]: One time tested

Flammability

Burning Behav. at 1.5mm nom. thickn.	V-0 class	IEC 60695-11-10
FMVSS Class	SE	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	mm/min	ISO 3795 (FMVSS 302)

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Physical/Other properties

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

Injection

Drying Recommended	yes
Drying Temperature	130 °C
Drying Time, Dehumidified Dryer	2 - 4 h
Processing Moisture Content	≤0.02 %
Melt Temperature Optimum	330 °C
Min. melt temperature	310 °C
Max. melt temperature	340 °C
Screw tangential speed	0.2 - 0.3 m/s
Mold Temperature Optimum	150 °C
Min. mould temperature	140 °C
Max. mould temperature	160 °C
Hold pressure range	30 - 70 MPa
Back pressure	3 MPa
Ejection temperature	225 °C

Additional information

Injection molding

Preprocessing

Predrying in a dehumidified air dryer at 130 - 140 degC/3-4 hours is recommended.

Processing

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.

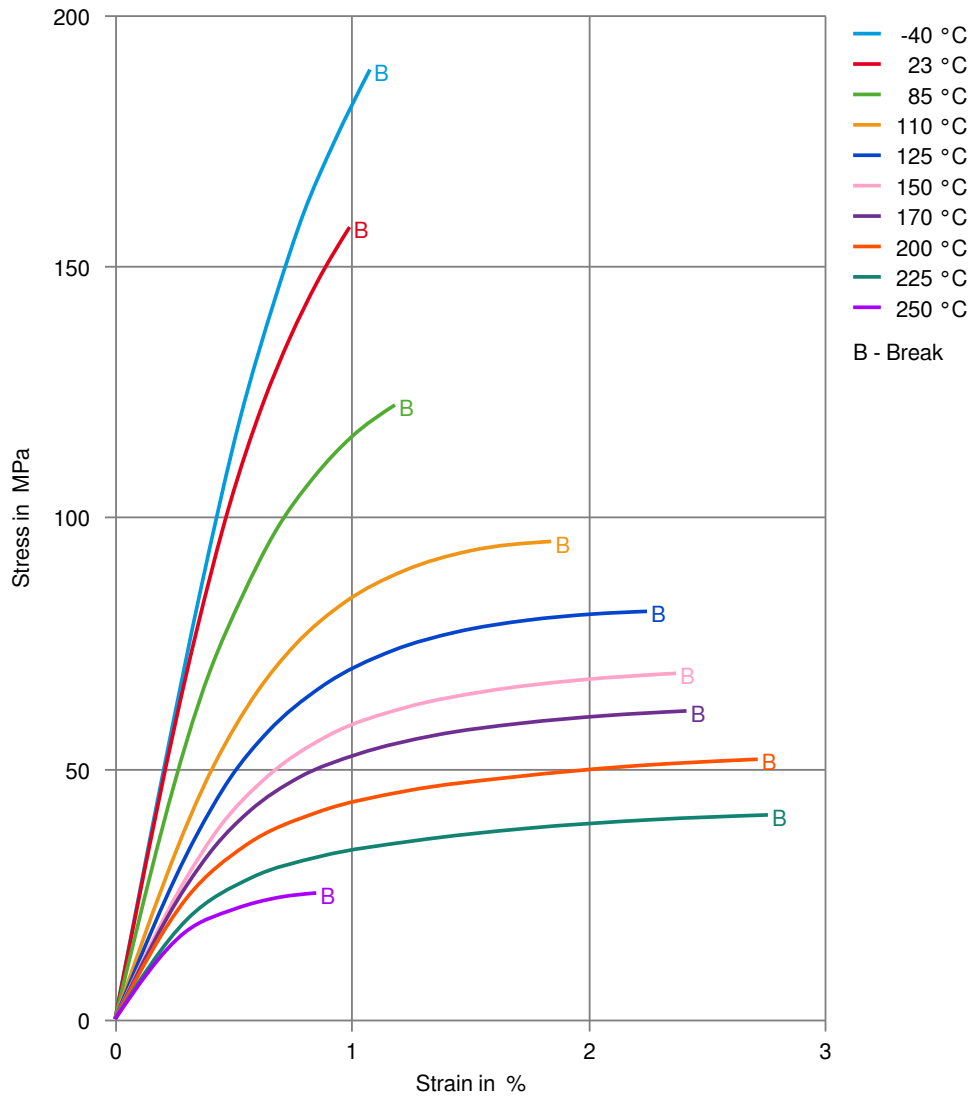
Postprocessing

Tool temperature of at least 135 degC is recommended for parts to achieve maximum crystallizable potential.

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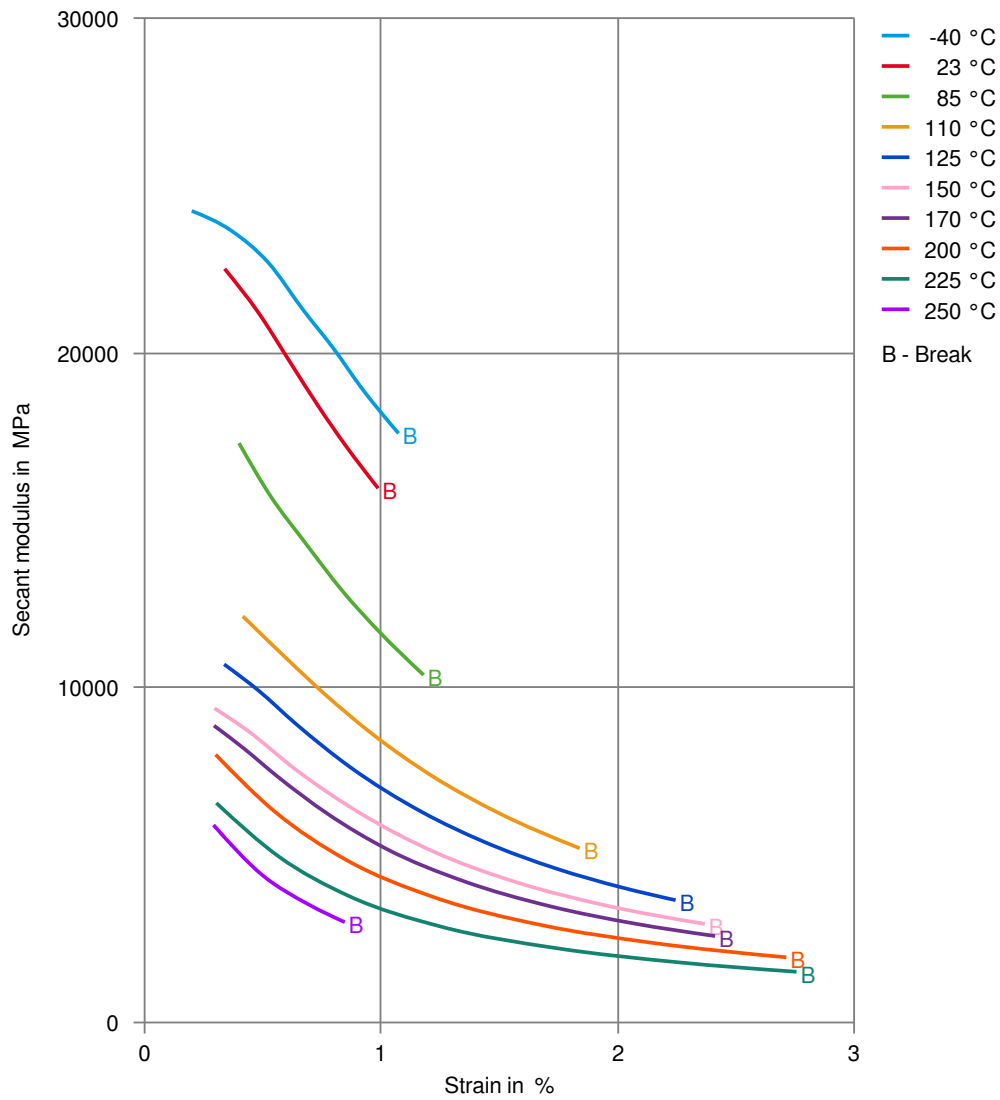
Stress-strain



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Polyphenylene sulfide

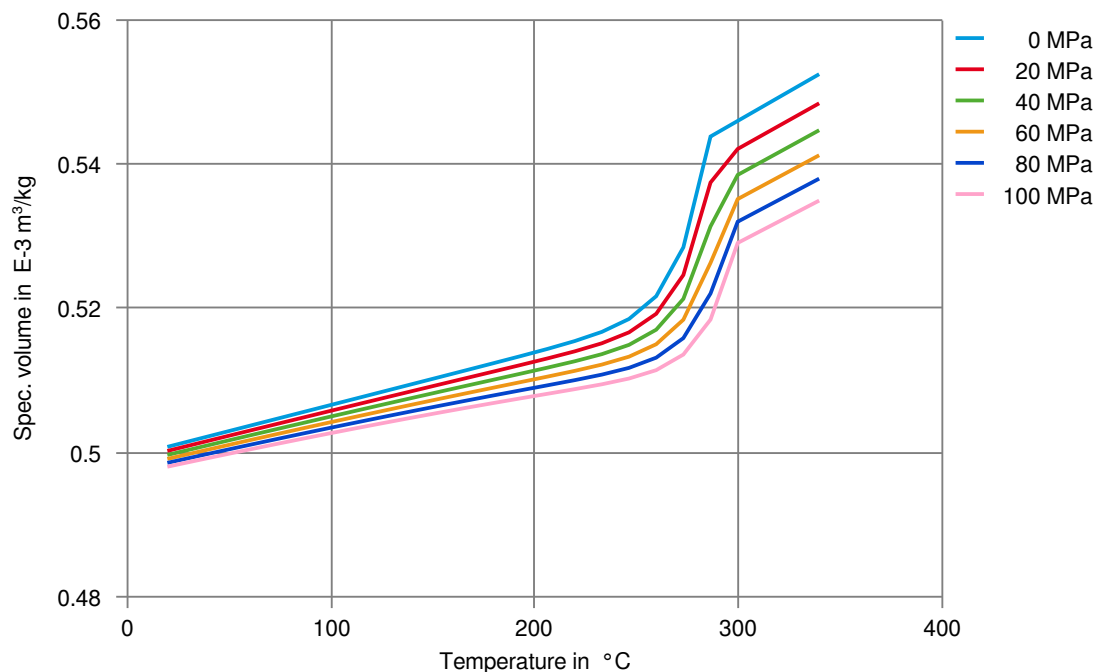
Secant modulus-strain



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Specific volume-temperature (pvT)



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