Celanese
The chemistry inside innovation™

FORTRON® FX72T6

Polyphenylene sulfide

Fortron® FX72T6 is an unreinforced, impact modified PPS with high flowability and high impact resistance suitable for injection molding.
The mechanical properties reported on this data sheet refer to a mold wall temperature of 135°C.

Product information

Resin Identification	PPS		ISO 1043
Part Marking Code	>PPS<		ISO 11469

Rheological properties

Melt mass-flow rate	35	g/10min	ISO 1133
Melt mass-flow rate, Temperature	310	°C	
Melt mass-flow rate, Load	2.16	kg	
Moulding shrinkage, parallel	1.3	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.3	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	1680	MPa	ISO 527-1/-2
Tensile stress at break, 50mm/min	40	MPa	ISO 527-1/-2
Tensile strain at break, 50mm/min	20	%	ISO 527-1/-2
Flexural modulus	1700	MPa	ISO 178
Charpy impact strength, 23°C	N	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	10	kJ/m²	ISO 179/1eA
Izod notched impact strength, 23°C	10	kJ/m²	ISO 180/1A
Izod impact strength, 23°C	N	kJ/m²	ISO 180/1U
Poisson's ratio	0.411		

Thermal properties

Temperature of deflection under load, 1.8 MPa	100	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	122	°C	ISO 306

Flammability

Burning Behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	3	mm	IEC 60695-11-10
Oxygen index	48.5	%	ISO 4589-1/-2

Electrical properties

Relative permittivity, 1MHz	3.1		IEC 62631-2-1
Dissipation factor, 1MHz	3	E-4	IEC 62631-2-1

Physical/Other properties

Density	1180	kg/m³	ISO 1183

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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	3.5	MPa
Ejection temperature	225	°C

Additional information

Injection molding

Processing

Injection Molding:

Drying – alternate 80°C, approx. 6 hours

Mold surface temperature – a wide range of 30°C to 135°C is possible. Highest crystallinity will often be achieved at higher mold temperature. Depending on the part design, improved surface appearance and demolding may be achieved at 50°C to 70°C.

Processing Notes

Pre-Drying

Fortron® should in principle be predried. Because of the necessary low maximum residual moisture content, the use of dry air dryers is recommended. The dew point should be < -30°C. The time between drying and processing should be as short as possible.

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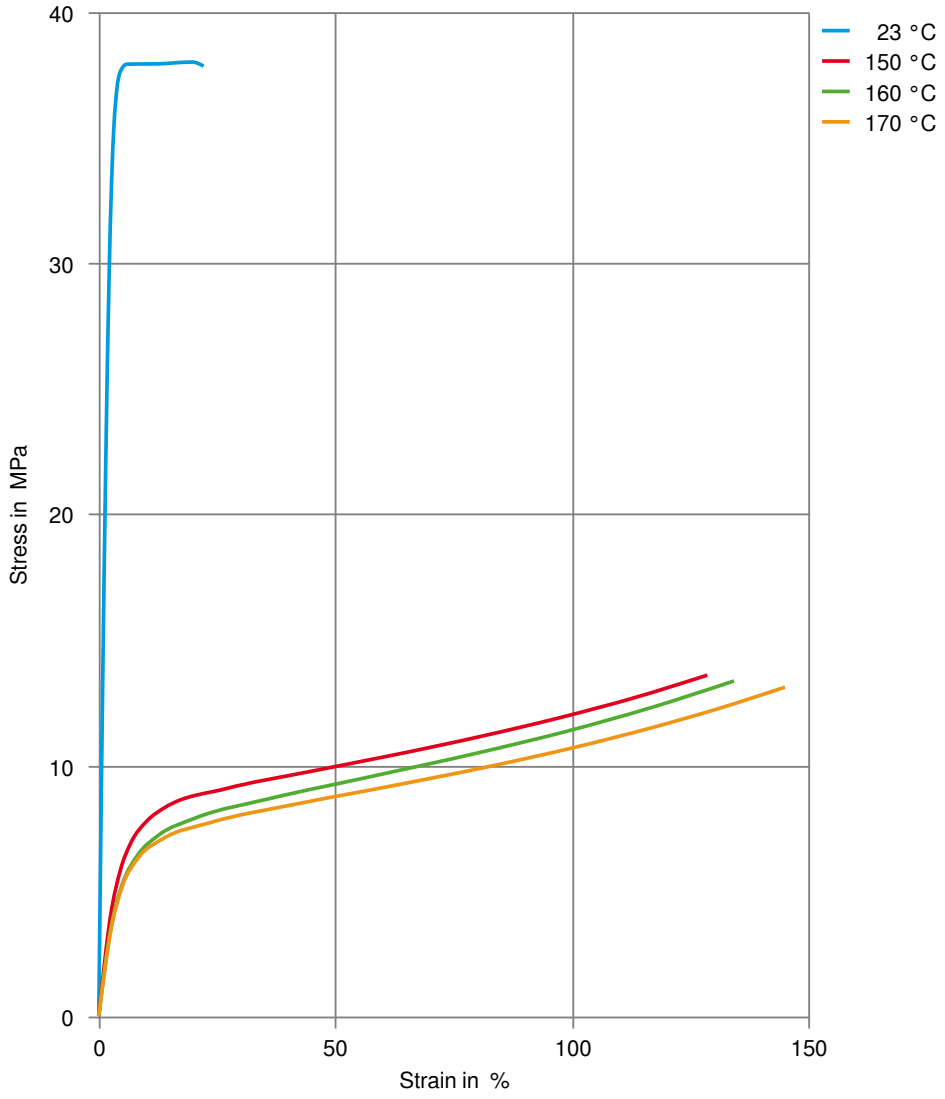
Stress-strain



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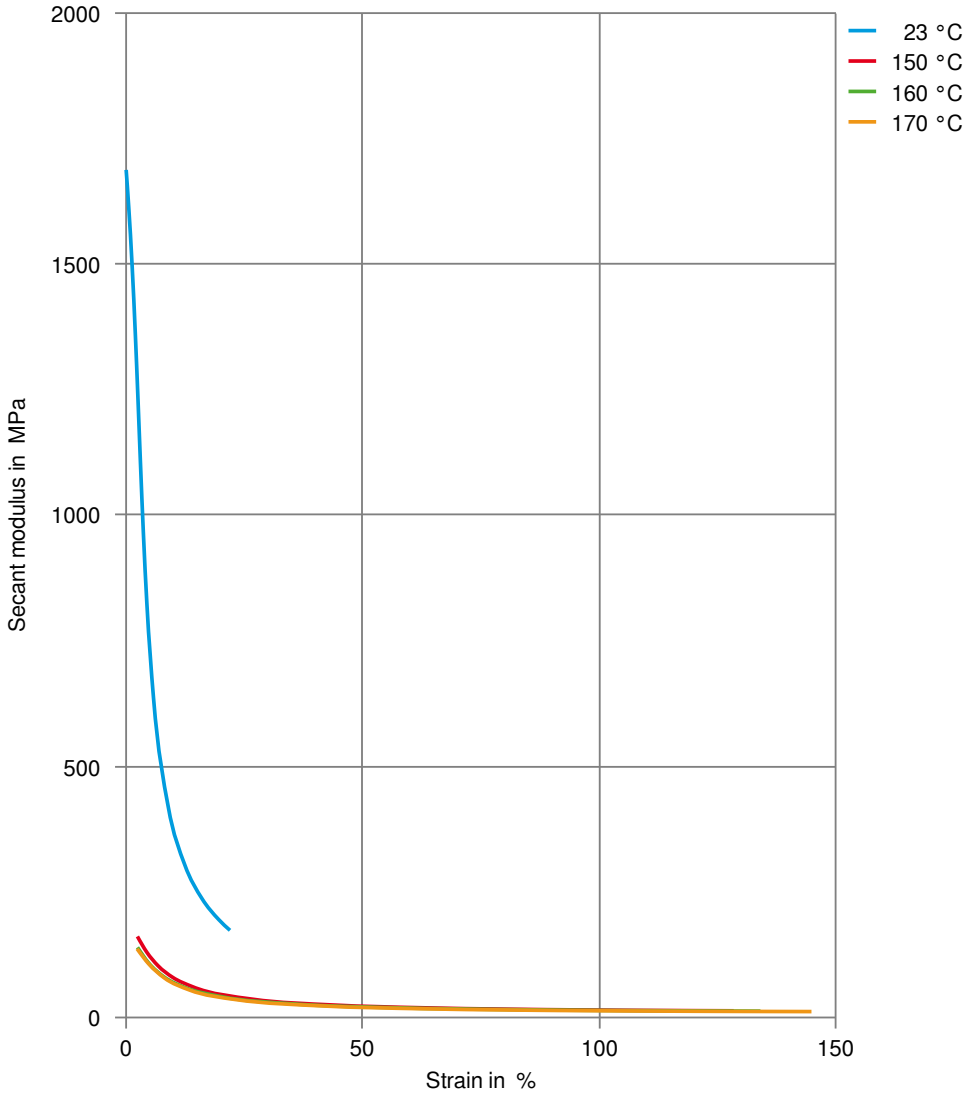
Secant modulus-strain



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