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	590	°F	
Melt mass-flow rate, Load	4.76	lb	
Molding shrinkage, parallel	1.3	%	ISO 294-4, 2577
Molding shrinkage, normal	1.3	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	244000	psi	ISO 527-1/-2
Tensile stress at break, 50mm/min	5800	psi	ISO 527-1/-2
Tensile strain at break, 50mm/min	20	%	ISO 527-1/-2
Flexural modulus	247000	psi	ISO 178
Charpy impact strength, 23°C	N	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	4.76	ftlb/in²	ISO 179/1eA
Izod notched impact strength, 23°C	4.76	ftlb/in²	ISO 180/1A
Izod impact strength, 23°C	N	ftlb/in²	ISO 180/1U
Poisson's ratio	0.411		

Thermal properties

Temperature of deflection under load, 1.8 MPa	212	°F	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	252	°F	ISO 306

Flammability

Burning Behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.1181	in	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	0.0426	lb/in³	ISO 1183

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Injection

Drying Recommended	yes	
Drying Temperature	266	°F
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	≤0.02	%
Melt Temperature Optimum	626	°F
Min. melt temperature	590	°F
Max. melt temperature	644	°F
Max. screw tangential speed	0.2 - 0.3	m/s
Mold Temperature Optimum	248	°F
Min. mold temperature	176	°F
Max. mold temperature	320	°F
Hold pressure range	4350 - 10200	psi
Back pressure	508	psi
Ejection temperature	437	°F

Automotive

OEM	STANDARD
Ford	WSS-M4D1063-A2

Characteristics

Processing	Injection Molding
Special characteristics	High impact or impact modified, High Flow

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

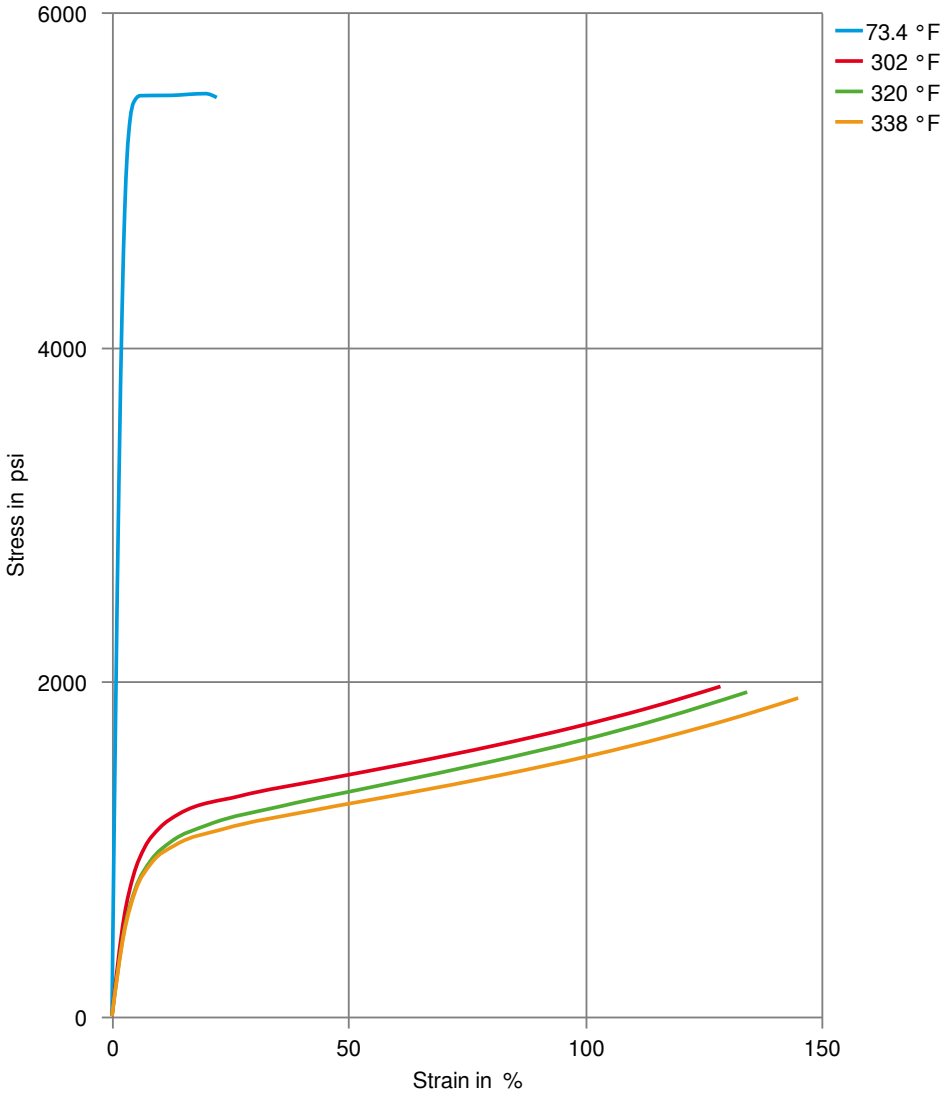
Pre-Drying

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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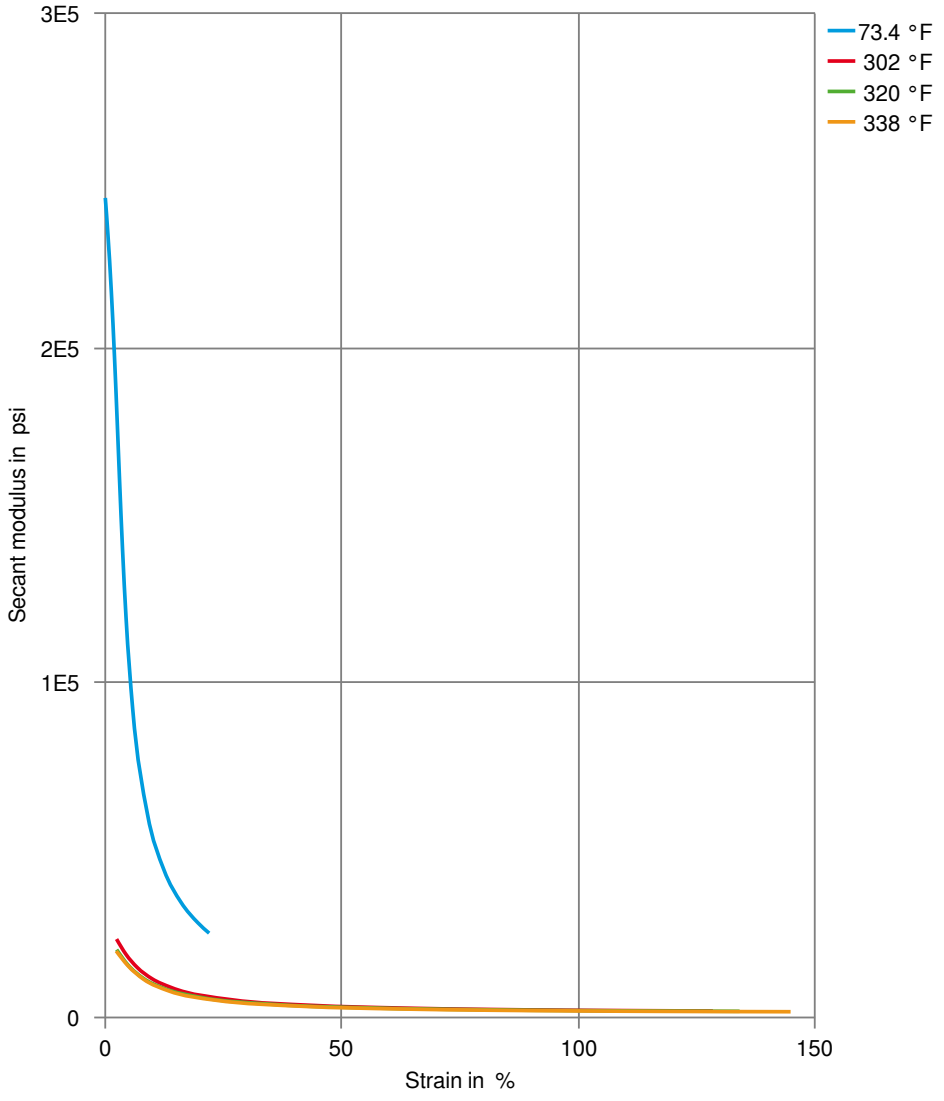
Stress-strain



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Secant modulus-strain



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