

# FORTRON® FX55T1

## Polyphenylene sulfide

Fortron® FX55T1 is an unreinforced, impact-modified poly(phenylene sulfide) with high melt viscosity suitable for extrusion.

Product information			
Resin Identification	PPS		ISO 1043
Part Marking Code	>PPS<		ISO 11469
Rheological properties			
Moulding shrinkage, parallel	1.5	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.6	%	ISO 294-4, 2577
Typical mechanical properties			
Tensile modulus	2300	MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min		MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min		%	ISO 527-1/-2
Tensile stress at break, 50mm/min	50	MPa	ISO 527-1/-2
Tensile strain at break, 50mm/min	40	%	ISO 527-1/-2
Flexural modulus	2280	MPa	ISO 178
Flexural stress at 3.5%		MPa	ISO 178
Charpy impact strength, 23°C		kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C		kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30 °C	35 0.39 <sup>[C]</sup>	kJ/m²	ISO 179/1eA
Poisson's ratio	0.39		
[C]: Calculated			
Thermal properties			
Melting temperature, 10°C/min	280	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	100		ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	160		ISO 306
Vicat softening temperature, 50°C/h 10N	270		ISO 306
Coefficient of linear thermal expansion (CLTE), parallel	80	E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE),	95	E-6/K	ISO 11359-1/-2
normal	33	L-0/IX	100 11009-1/-2
Thermal conductivity, flow	0.319 <sup>[OT]</sup>	W/(m K)	ISO 22007-2
Thermal conductivity, through plane	0.314 <sup>[OT]</sup>		ISO 22007-2
Effective thermal diffusivity, flow	1.7E-7 <sup>[OT]</sup>		ISO 22007-4
Effective thermal diffusivity, through plane	1.67E-7 <sup>[OT]</sup>		ISO 22007-4
Specific heat capacity of melt	1500 <sup>[OT]</sup>	J/(kg K)	ISO 22007-4
[OT]: One time tested			
Flammability			
Glow Wire Ignition Temperature, 0.75mm	850	°C	IEC 60695-2-13

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### Physical/Other properties

Density 1250 kg/m<sup>3</sup> 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	3.5	MPa

#### Additional information

Injection molding Processing

Drying - alternate 80°C, approx. 6 hours

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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