



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 Part Marking Code	PPS >PPS<		ISO 1043 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	55	MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min		%	ISO 527-1/-2
Tensile stress at break, 50mm/min		MPa	ISO 527-1/-2
Tensile strain at break, 50mm/min	40		ISO 527-1/-2
Flexural modulus	2280		ISO 178
Flexural stress at 3.5%		MPa	ISO 178
Charpy impact strength, 23°C Charpy notched impact strength, 23°C		kJ/m² kJ/m²	ISO 179/1eU ISO 179/1eA
Charpy notched impact strength, -30 °C		kJ/m ²	ISO 179/1eA
Poisson's ratio	0.39 ^[C]	NO/III	ISO 179/TEA
[C]: Calculated	0.00		
Thermal properties			
	280	۰.	100 11057 1/0
Melting temperature, 10°C/min Temperature of deflection under load, 1.8 MPa	100		ISO 11357-1/-3 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		E-6/K	ISO 11359-1/-2
(CLTE), parallel			
Coefficient of linear thermal expansion (CLTE), normal	95	E-6/K	ISO 11359-1/-2
Thermal conductivity, flow	0.319 ^[OT]		ISO 22007-2
Thermal conductivity, through plane	0.314 ^[OT]		ISO 22007-2
Effective thermal diffusivity, flow	1.7E-7 ^[OT]		ISO 22007-4
Effective thermal diffusivity, through plane	1.67E-7 ^[OT]		ISO 22007-4
Specific heat capacity of melt	1500 ^[O1]	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/m³ 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	120	°C
Min. mould temperature	80	°C
Max. mould temperature	160	°C
Hold pressure range	30 - 70	MPa
Back pressure	3.5	MPa

Characteristics

Processing Injection Moulding, Extrusion, Blow Moulding

Special characteristics High impact or impact modified

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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