

# FORTRON® FX75T1

## Polyphenylene sulfide

Fortron® FX75T1 is an unreinforced, impact-modified poly(phenylene sulfide) with high melt viscosity suitable for extrusion.

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

### Rheological properties

Moulding shrinkage, parallel	1.9 %	ISO 294-4, 2577
Moulding shrinkage, normal	2.1 %	ISO 294-4, 2577

## Typical mechanical properties

Tensile modulus	1650	MPa	ISO 527-1/-2
Tensile stress at break, 50mm/min	42	MPa	ISO 527-1/-2
Tensile strain at break, 50mm/min	80	%	ISO 527-1/-2
Flexural modulus	1600	MPa	ISO 178
Flexural stress at 3.5%		MPa	ISO 178
Charpy notched impact strength, 23°C	70 <sup>[OT]</sup>	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	50 <sup>[OT]</sup>	kJ/m²	ISO 179/1eA
Poisson's ratio	0.42 <sup>[C]</sup>		

[OT]: One time tested [C]: Calculated

### Thermal properties

Temperature of deflection under load, 1.8 MPa	95	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	120	°C	ISO 306
Vicat softening temperature, 50°C/h 10N	270	°C	ISO 306
Coefficient of linear thermal expansion	98	E-6/K	ISO 11359-1/-2
(CLTE), parallel			
Coefficient of linear thermal expansion (CLTE),	122	E-6/K	ISO 11359-1/-2
normal			
Thermal conductivity, flow	0.332 <sup>[OT]</sup>		ISO 22007-2
Thermal conductivity, through plane	0.346 <sup>[OT]</sup>		ISO 22007-2
Effective thermal diffusivity, flow	1.65E-7 <sup>[OT]</sup>	m²/s	ISO 22007-4
Effective thermal diffusivity, through plane	1.73E-7 <sup>[OT, 1]</sup>		ISO 22007-4
Specific heat capacity of melt	1670 <sup>[OT]</sup>	J/(kg K)	ISO 22007-4
[OT]: One time tested			

[1]: Ref: AL-014114, data by Tony Yu

### **Electrical properties**

Relative permittivity, 1MHz	3.24	IEC 62631-2-1
Dissipation factor, 1MHz	6 E-4	IEC 62631-2-1
Volume resistivity	2E15 Ohm.m	IEC 62631-3-1

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### Physical/Other properties

Density 1200 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

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