

# FORTRON® FX75T1

## Polyphenylene sulfide

Fortron® FX75T1 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	1.9 %	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%	50 MPa	ISO 178
Charpy notched impact strength, 23°C	70 <sup>[OT]</sup> kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	50 <sup>[OT]</sup> kJ/m <sup>2</sup>	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 (CLTE), parallel	98 E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	122 E-6/K	ISO 11359-1/-2
Thermal conductivity, flow	0.332 <sup>[OT]</sup> W/(m K)	ISO 22007-2
Thermal conductivity, through plane	0.346 <sup>[OT]</sup> W/(m K)	ISO 22007-2
Effective thermal diffusivity, flow	1.65E-7 <sup>[OT]</sup> m <sup>2</sup> /s	ISO 22007-4
Effective thermal diffusivity, through plane	1.73E-7 <sup>[OT, 1]</sup> m <sup>2</sup> /s	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
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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	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

## Automotive

OEM	STANDARD	ADDITIONAL INFORMATION
General Motors	GMW17769P-PPS-T2	Black
General Motors	GMW17769P-PPS-T2	Natural