Celanese
The chemistry inside innovation™

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[OT]	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	50[OT]	kJ/m²	ISO 179/1eA
Poisson's ratio	0.42[C]		

[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[OT]	W/(m K)	ISO 22007-2
Thermal conductivity, through plane	0.346[OT]	W/(m K)	ISO 22007-2
Effective thermal diffusivity, flow	1.65E-7[OT]	m²/s	ISO 22007-4
Effective thermal diffusivity, through plane	1.73E-7[OT, 1]	m²/s	ISO 22007-4
Specific heat capacity of melt	1670[OT]	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/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

Automotive

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

Revised: 2025-03-20 Source: Celanese Materials Database