FORTRON® FX4382T1

Polyphenylene sulfide

Fortron FX4382T1 is an impact-modified, unreinforced, extrusion/injection molding grade offering high tensile elongation.

Product information

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

Rheological properties

Molding shrinkage range, parallel	0.9 - 1.4	%	ISO 294-4, 2577
Molding shrinkage range, normal	0.7 - 1.4	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	334000	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	7250	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	25	%	ISO 527-1/-2
Flexural modulus	348000	psi	ISO 178
Compressive modulus	328000	psi	ISO 604
Compressive stress at 1% strain	3190	psi	ISO 604
Charpy impact strength, 23°C	N	ftlb/in²	ISO 179/1eU
Charpy notched impact strength, 23°C	19[OT]	ftlb/in²	ISO 179/1eA
Charpy notched impact strength, -30°C	4.76[OT]	ftlb/in²	ISO 179/1eA
Izod notched impact strength, 23°C	24.1	ftlb/in²	ISO 180/1A
Izod impact strength, 23°C	N	ftlb/in²	ISO 180/1U
Multiaxial impact, total energy, 23°C	540	in-lb	ASTM D 3763

[OT]: One time tested

Tribological properties

Coefficient of dynamic friction, against steel	0.2		ISO 8295

Thermal properties

Temperature of deflection under load, 1.8 MPa	212	°F	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	0.33	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	0.428	E-4/°F	ISO 11359-1/-2
Thermal conductivity, flow	0.302[OT]	W/(m K)	ISO 22007-2
Thermal conductivity, through plane	0.31[OT]	W/(m K)	ISO 22007-2
Effective thermal diffusivity, flow	1.67E-7[OT]	m²/s	ISO 22007-4
Effective thermal diffusivity, through plane	1.72E-7[OT]	m²/s	ISO 22007-4
Specific heat capacity of melt	1440[OT]	J/(kg K)	ISO 22007-4

[OT]: One time tested

Electrical properties

Volume resistivity	5E14	Ohm.m	IEC 62631-3-1
Comparative tracking index	150		IEC 60112
Dielectric Constant, 1 GHz	3.3		ASTM D 2520 B

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Physical/Other properties

Water absorption, 2mm	0.035	%	Sim. to ISO 62
Density	0.0455	lb/in³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	266	°F
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	≤0.02	%
Melt Temperature Optimum	626	°F
Min. melt temperature	590	°F
Max. melt temperature	644	°F
Max. screw tangential speed	0.2 - 0.3	m/s
Mold Temperature Optimum	248	°F
Min. mold temperature	176	°F
Max. mold temperature	320	°F
Hold pressure range	4350 - 10200	psi
Back pressure	508	psi
Ejection temperature	423	°F

Characteristics

Processing	Injection Molding, Extrusion
Special characteristics	High impact or impact modified

Additional information

Injection molding

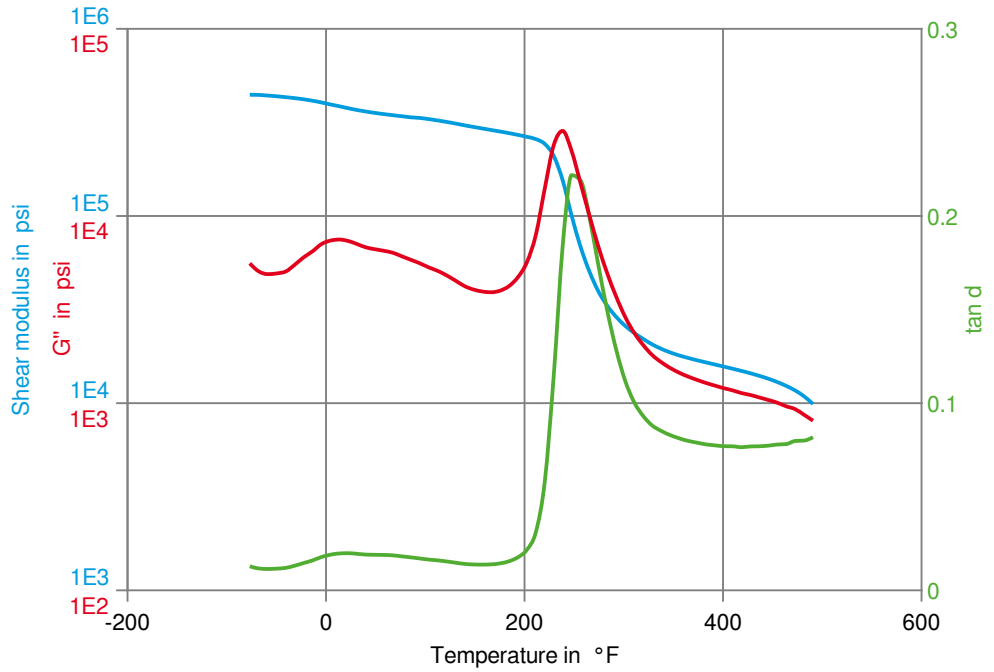
Processing

Drying - alternate: 82°C overnight.

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Dynamic Shear modulus-temperature



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