Celanese
The chemistry inside innovation™

FORTRON® 1200L1

Polyphenylene sulfide

Fortron 1200L1 is an unfilled grade recommended primarily for extrusion applications. It has a high melt viscosity and tensile elongation. Recommended processing conditions are similar to those of our standard unfilled PPS grades.

Product information

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

Rheological properties

Molding shrinkage, parallel	1.3	%	ISO 294-4, 2577
Molding shrinkage, normal	1.6	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	580000	psi	ISO 527-1/-2
Tensile strain at yield, 50mm/min	3	%	ISO 527-1/-2
Tensile stress at break, 50mm/min	12800	psi	ISO 527-1/-2
Tensile strain at break, 50mm/min	15	%	ISO 527-1/-2
Flexural modulus	595000	psi	ISO 178
Flexural strength	20500	psi	ISO 178
Charpy impact strength, 23°C	95.1	ftlb/in²	ISO 179/1eU
Hardness, Rockwell, M-scale	93		ISO 2039-2

Thermal properties

Melting temperature, 10°C/min	536[OT, 1]	°F	ISO 11357-1/-3
Glass transition temperature, 10°C/min	194	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	212	°F	ISO 75-1/-2
Temperature of deflection under load, 8 MPa	189	°F	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	0.22	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	0.233	E-4/°F	ISO 11359-1/-2

[OT]: One time tested

[1]: In alignment with all regional Product Specialists - changed from 275°C to 280°C as no one is aware of where 275°C is coming from

Flammability

Burning Behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.1181	in	IEC 60695-11-10

Electrical properties

Electric strength	762	kV/in	IEC 60243-1

Physical/Other properties

Water absorption, 2mm	0.02	%	Sim. to ISO 62
Density	0.0484	lb/in³	ISO 1183

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Injection

Drying Recommended	yes	
Drying Temperature	212	°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	302	°F
Min. mold temperature	284	°F
Max. mold temperature	320	°F
Hold pressure range	4350 - 10200	psi

Characteristics

Processing	Injection Molding, Extrusion, Sheet Extrusion, Other Extrusion, Blow Molding
Special characteristics	High viscosity

Additional information

Processing Notes

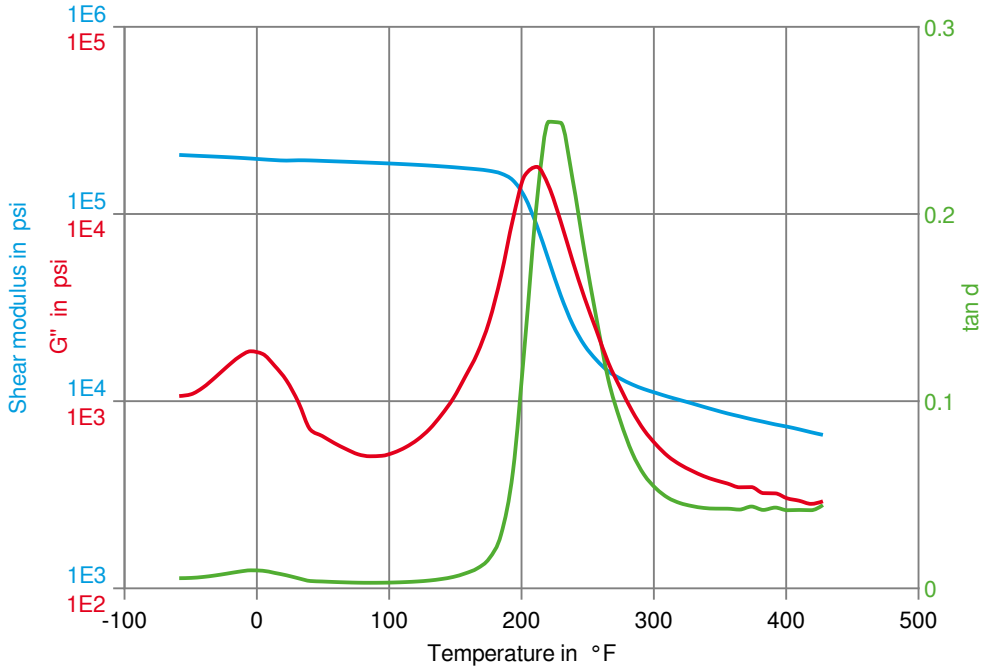
Processing Notes

The higher drying conditions result in higher melt viscosity.

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Dynamic Shear modulus-temperature

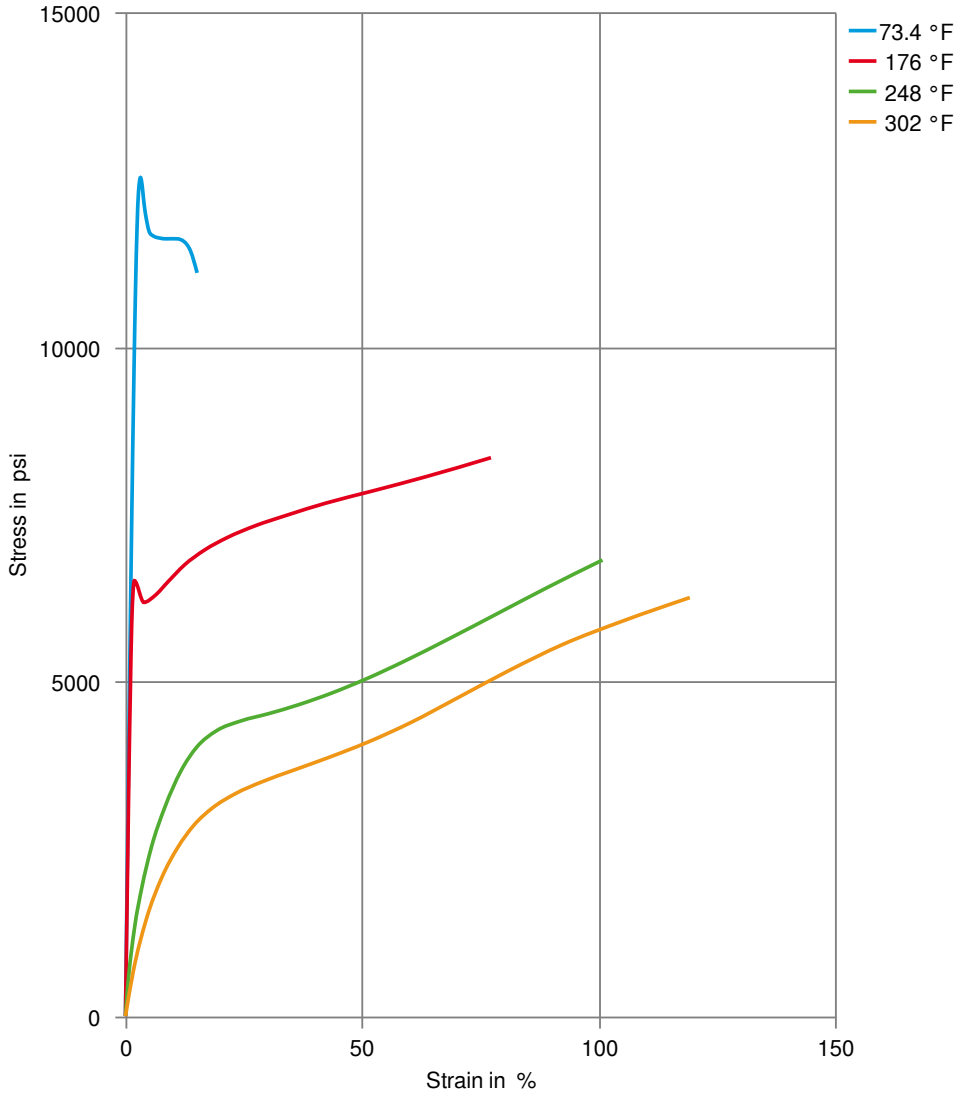


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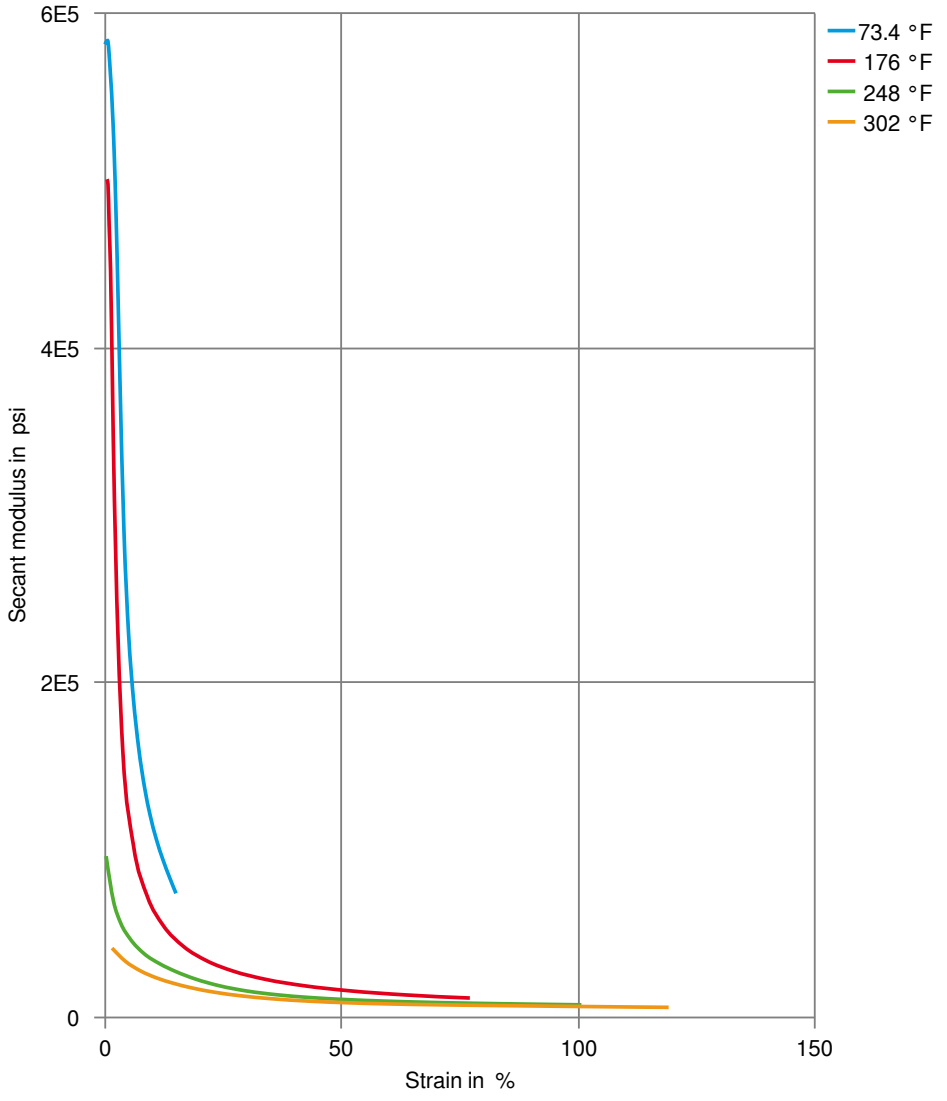
Stress-strain



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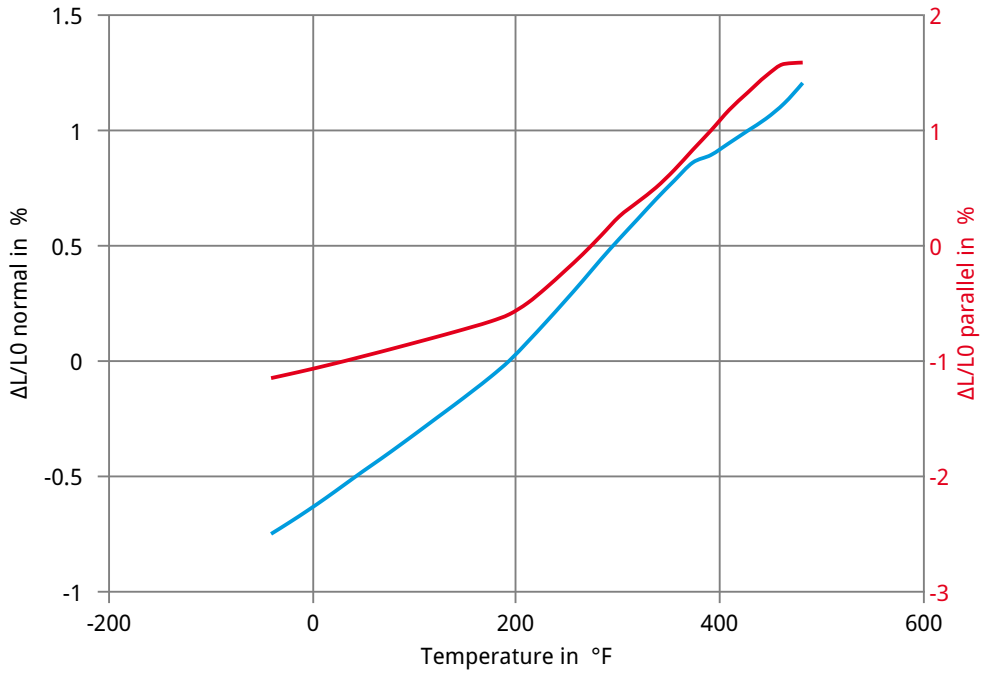
Secant modulus-strain



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Thermal expansion



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