Celanese
The chemistry inside innovation™

FORTRON® 1140T4

Polyphenylene sulfide

Product information

Resin Identification	PPS-GF40	ISO 1043
Part Marking Code	>PPS-GF40<	ISO 11469

Typical mechanical properties

Tensile modulus	14500	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	180	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.1	%	ISO 527-1/-2
Flexural modulus	14500	MPa	ISO 178
Flexural strength	270	MPa	ISO 178
Charpy impact strength, 23°C	60	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	50	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	14	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	12	kJ/m²	ISO 179/1eA
Izod notched impact strength, 23°C	14	kJ/m²	ISO 180/1A
Izod notched impact strength, -30°C	12.0	kJ/m²	ISO 180/1A
Izod impact strength, 23°C	55	kJ/m²	ISO 180/1U
Izod impact strength, -30°C	50	kJ/m²	ISO 180/1U
Poisson's ratio	0.33[C]		

[C]: Calculated

Thermal properties

Melting temperature, 10°C/min	280	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	90	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	265	°C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	16	E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	48	E-6/K	ISO 11359-1/-2

Flammability

Burning Behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.8	mm	IEC 60695-11-10

Electrical properties

Volume resistivity	>1E13	Ohm.m	IEC 62631-3-1
Surface resistivity	>1E15	Ohm	IEC 62631-3-2
Electric strength	20	kV/mm	IEC 60243-1

Physical/Other properties

Density	1610	kg/m³	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	150	°C
Min. mould temperature	140	°C
Max. mould temperature	160	°C
Hold pressure range	30 - 70	MPa
Back pressure	3	MPa
Ejection temperature	213	°C

FORTRON® 1140T4

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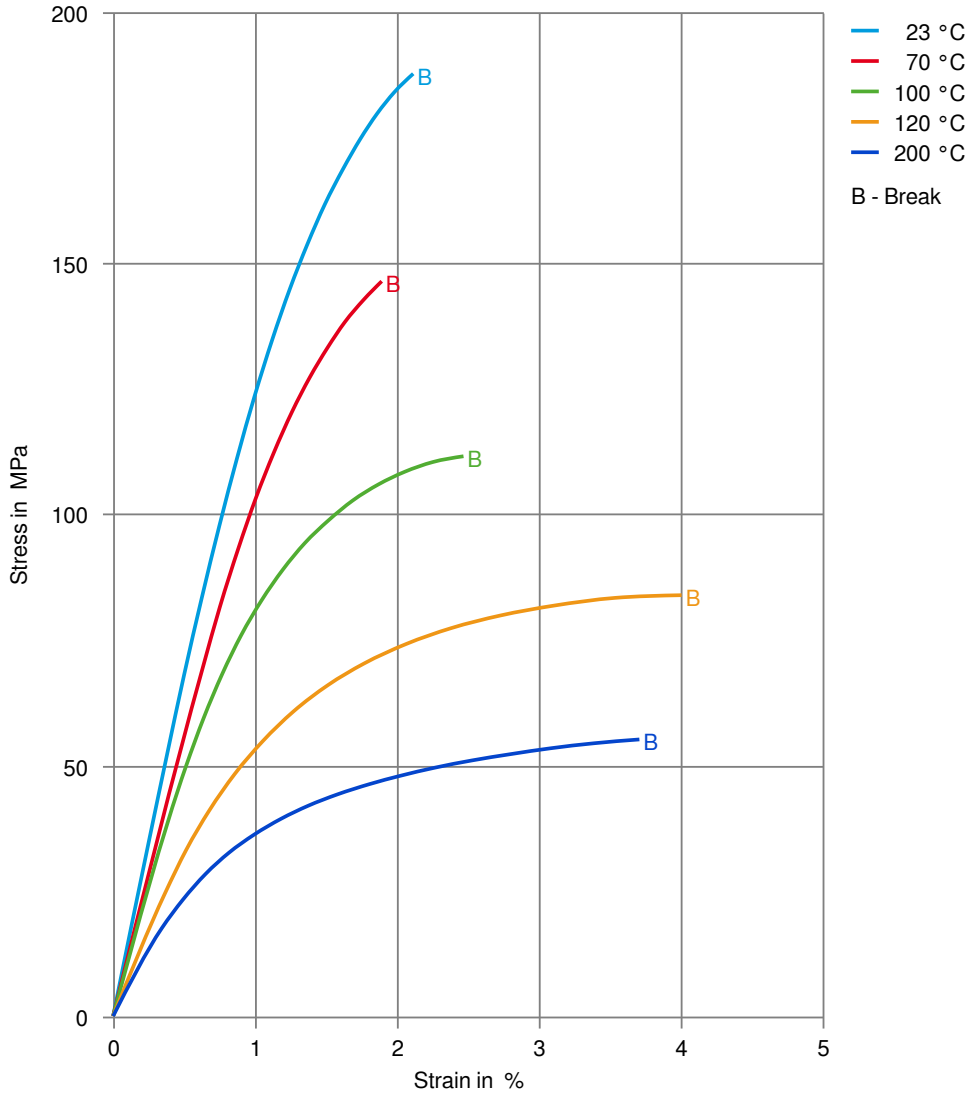
Stress-strain



FORTRON® 1140T4

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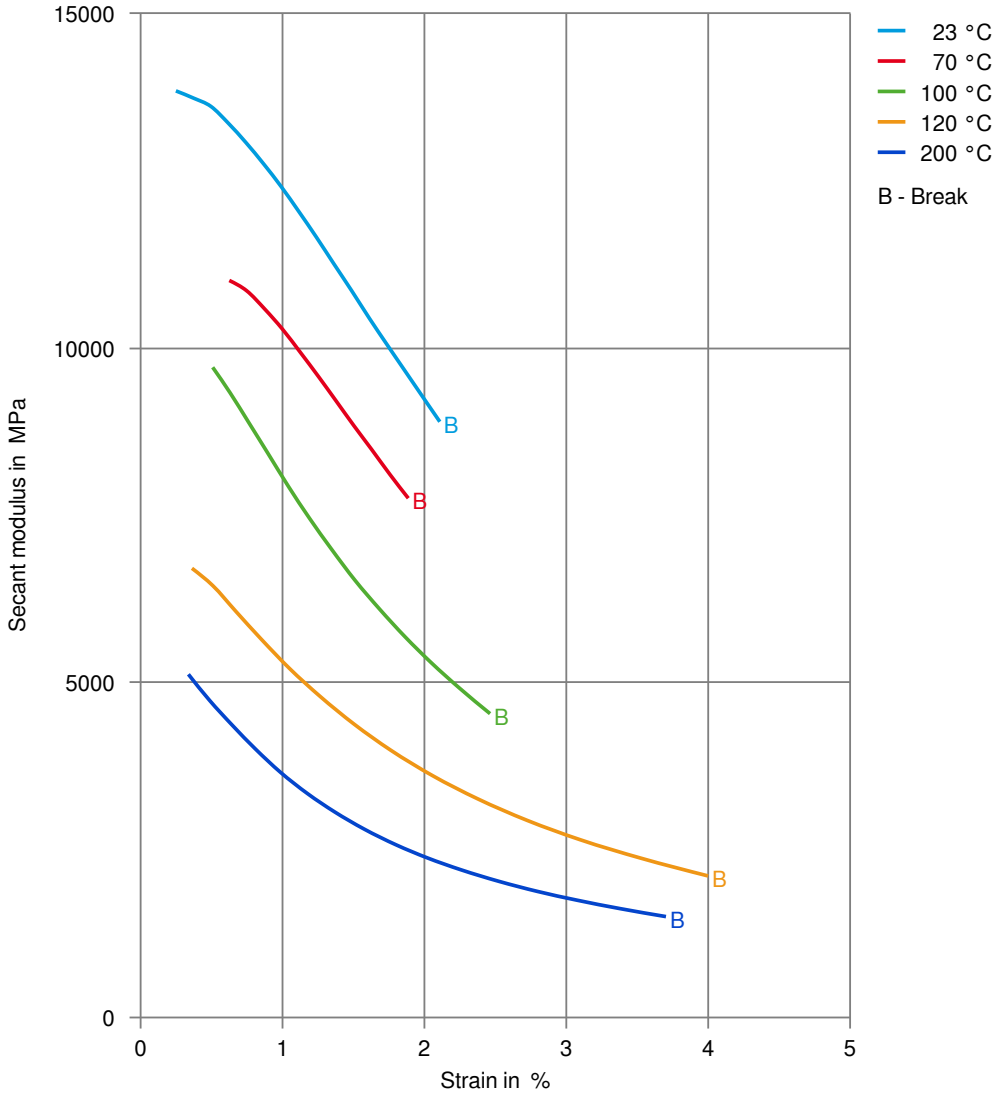
Secant modulus-strain



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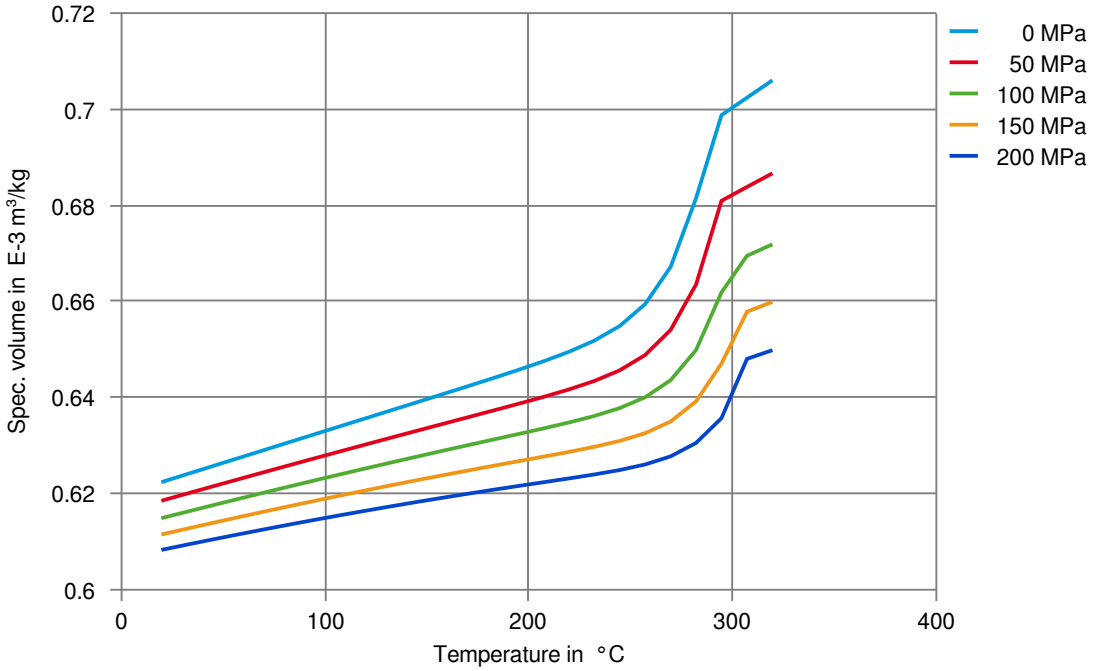
Specific volume-temperature (pvT)



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