Celanese
The chemistry inside innovation™

FORTRON® CES 6145 LCG

Polyphenylene sulfide

FORTRON® CES 6145 LCG is a glass fiber and mineral reinforced grade with low Chlorine content. It offers excellent physical properties and good flowability for consumer electronics applications.

Product information

Resin Identification	PPS-(GF+MD)45	ISO 1043
Part Marking Code	>PPS-(GF+MD)45<	ISO 11469

Rheological properties

Moulding shrinkage, parallel	0.3	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.6	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	16000	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	190	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	1.8	%	ISO 527-1/-2
Flexural modulus	16000	MPa	ISO 178
Flexural strength	280	MPa	ISO 178
Charpy impact strength, 23°C	9	kJ/m²	ISO 179/1eU
Poisson's ratio	0.372		

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	273	°C	ISO 75-1/-2

Flammability

Burning Behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.4	mm	IEC 60695-11-10

Electrical properties

Relative permittivity, printed circuits and boards, 2.5 GHz	4.1		IEC 61189-2-721
Dissipation factor, printed circuits and boards, 2.5 GHz	40	E-4	IEC 61189-2-721

Physical/Other properties

Water absorption, 2mm	0.02	%	Sim. to ISO 62
Density	1720	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

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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

Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Special characteristics	Flame retardant, Heat stabilised or stable to heat, Hydrolysis resistant, High Flow, Chemical resistant

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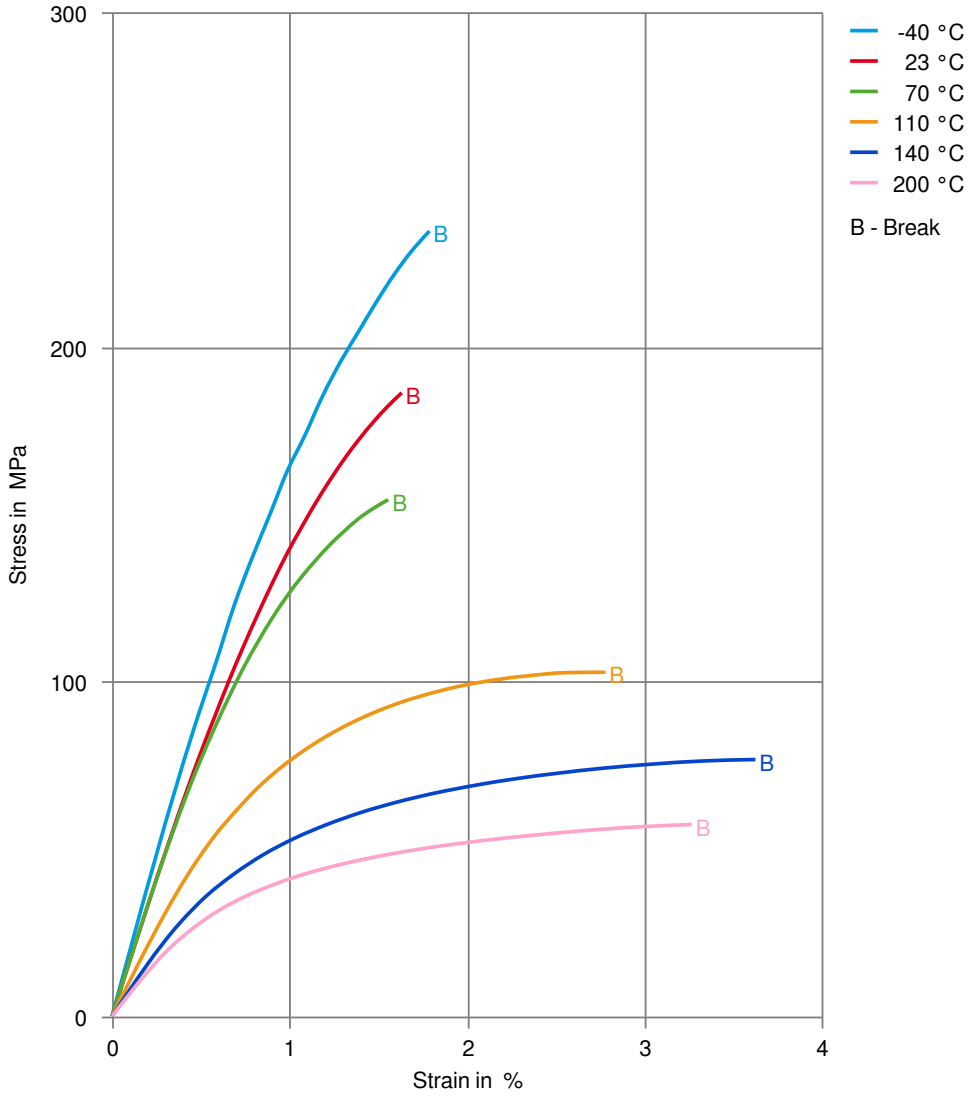
Stress-strain



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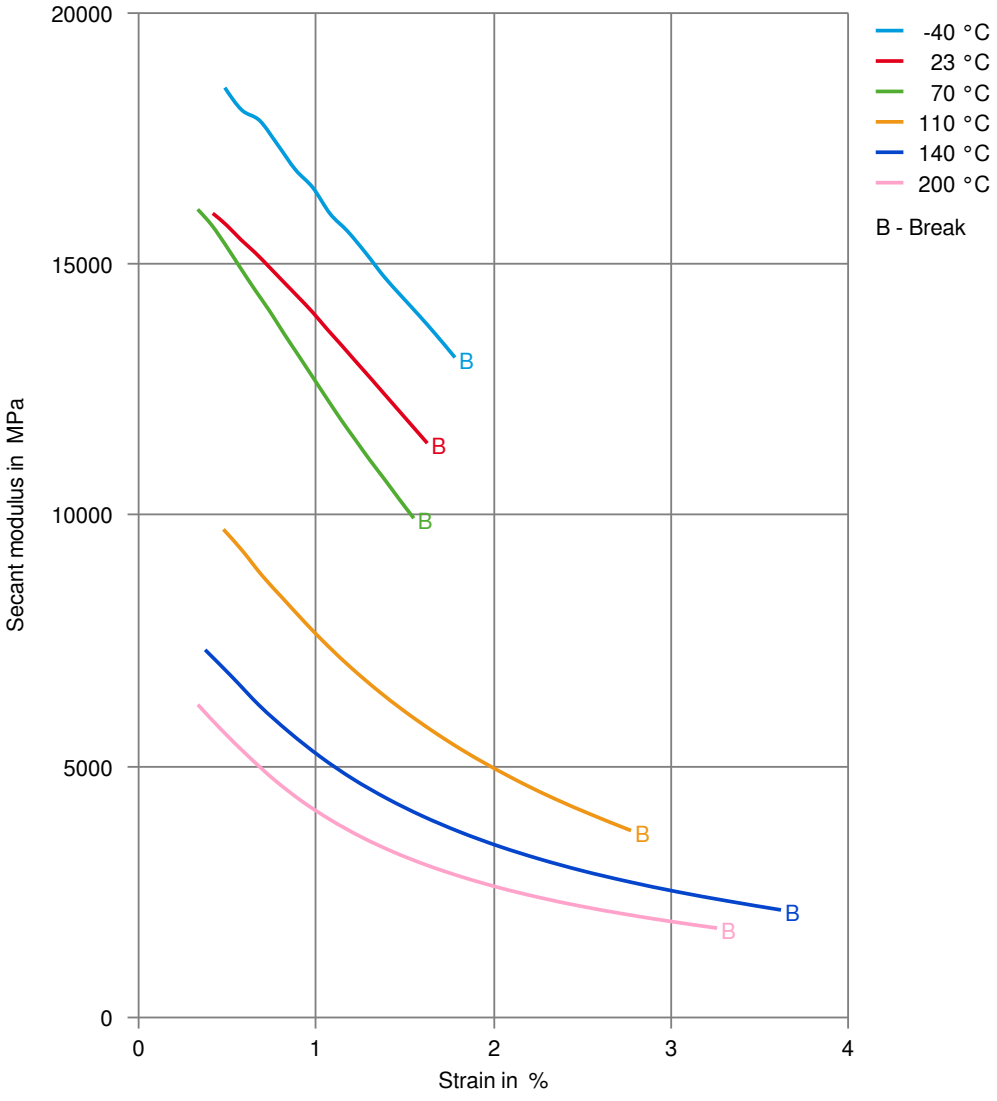
Secant modulus-strain



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Chemical Media Resistance

Standard Fuels

- ✔ ISO 1817 Liquid 1 - E5, 60°C
- ✔ ISO 1817 Liquid 2 - M15E4, 60°C
- ✔ ISO 1817 Liquid 3 - M3E7, 60°C
- ✔ ISO 1817 Liquid 4 - M15, 60°C
- ✔ Standard fuel without alcohol (pref. ISO 1817 Liquid C), 23°C
- ✔ Standard fuel with alcohol (pref. ISO 1817 Liquid 4), 23°C

Symbols used:

✔ possibly resistant
Defined as: Supplier has sufficient indication that contact with chemical can be potentially accepted under the intended use conditions and expected service life. Criteria for assessment have to be indicated (e.g. surface aspect, volume change, property change).

✘ not recommended - see explanation
Defined as: Not recommended for general use. However, short-term exposure under certain restricted conditions could be acceptable (e.g. fast cleaning with thorough rinsing, spills, wiping, vapor exposure).

Revised: 2025-03-25 Source: Celanese Materials Database