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The chemistry inside innovation™

COOLPOLY® D5120

COOLPOLY®

CoolPoly D series of thermally conductive plastics transfers heat, a characteristic previously unavailable in injection molding grade polymers. CoolPoly is lightweight, netshape moldable and allows design freedom in applications previously restricted to metals. The D series is electrically non-conductive and can be used for its dielectric properties.

Product information

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

Rheological properties

Moulding shrinkage, parallel	0.2	%	ISO 294-4, 2577
Moulding shrinkage, normal	0.5	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	16000	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	125	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	0.8	%	ISO 527-1/-2
Flexural modulus	18000	MPa	ISO 178
Flexural strength	190	MPa	ISO 178
Charpy impact strength, 23°C	13	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	3.5	kJ/m²	ISO 179/1eA
Hardness, Rockwell, M-scale	100		ISO 2039-2
Poisson's ratio	0.33[C]		

[C]: Calculated

Thermal properties

Temperature of deflection under load, 1.8 MPa	260	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	280	°C	ISO 75-1/-2
Thermal conductivity, flow	0.7	W/(m K)	ISO 22007-2
Thermal conductivity, through plane	0.7	W/(m K)	ISO 22007-2

Flammability

Burning Behav. at 1.5mm nom. thickn.	V-0	class	IEC 60695-11-10
Thickness tested	1.5	mm	IEC 60695-11-10
Burning Behav. at thickness h	V-0	class	IEC 60695-11-10
Thickness tested	0.6	mm	IEC 60695-11-10
UL recognition	yes		UL 94

Electrical properties

Surface resistivity	1E14	Ohm	IEC 62631-3-2

Physical/Other properties

Density	2000	kg/m³	ISO 1183

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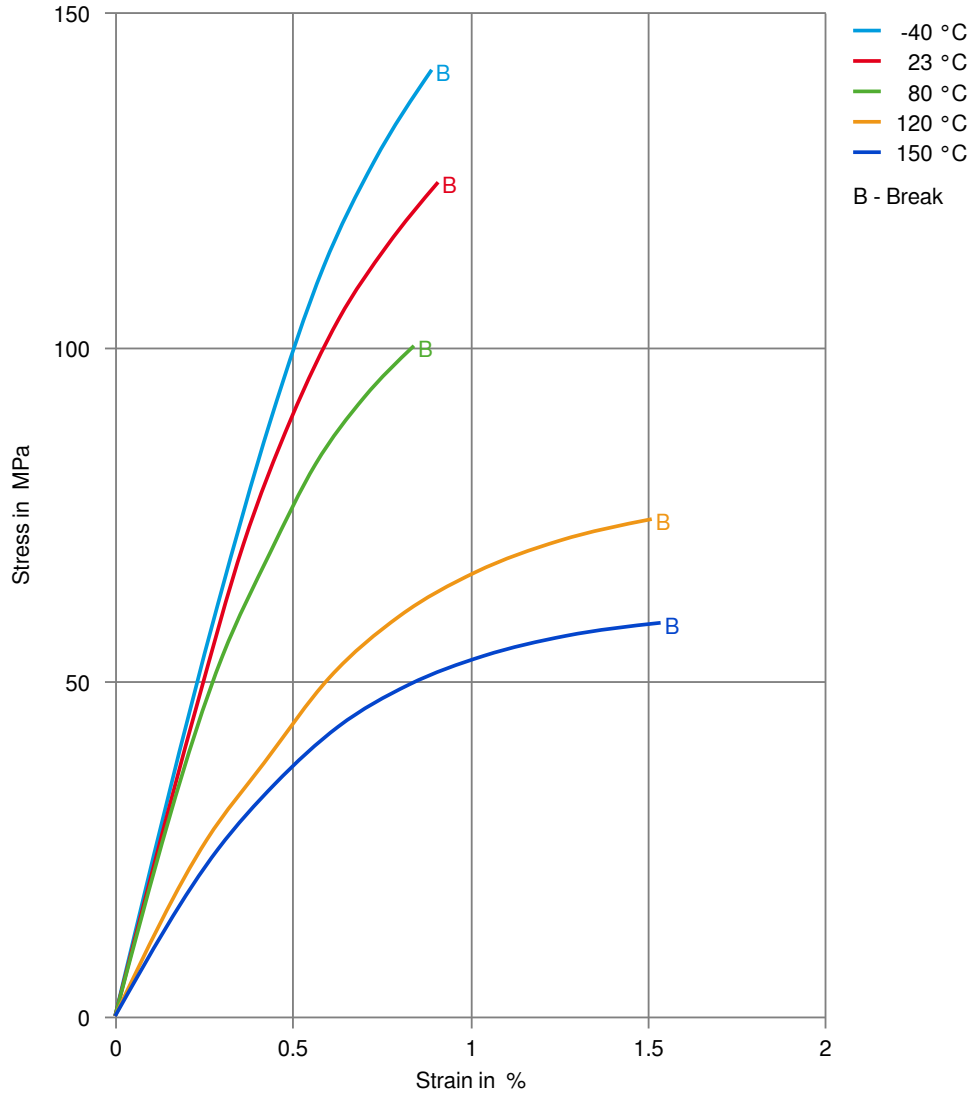
Injection

Back pressure	0.7 MPa

Characteristics

Processing	Injection Moulding
Special characteristics	Flame retardant, Light weight

Stress-strain



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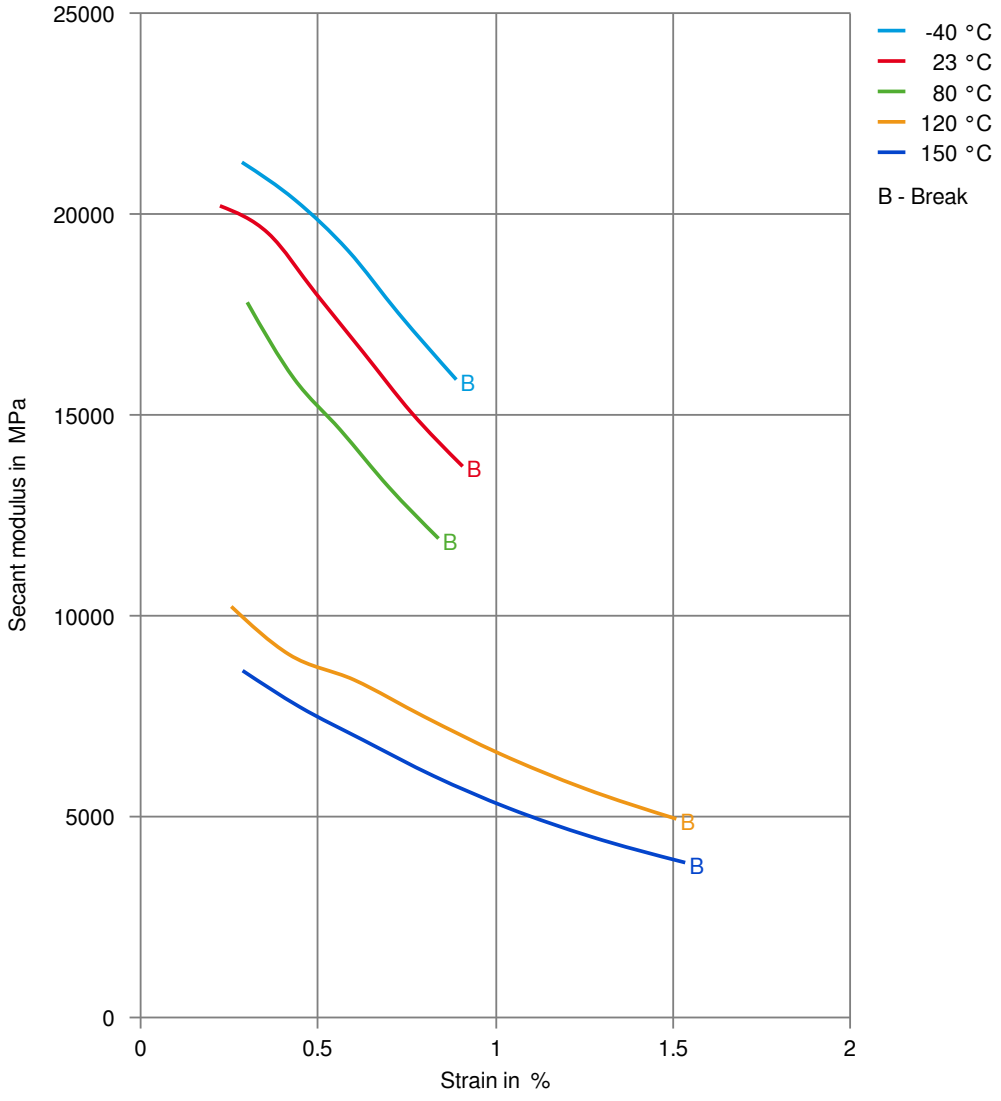
Secant modulus-strain



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