

# 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/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C	3.5 kJ/m <sup>2</sup>	ISO 179/1eA
Hardness, Rockwell, M-scale	100	ISO 2039-2
Poisson's ratio	0.33 <sup>[C]</sup>	

[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
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### Physical/Other properties

Density	2000 kg/m <sup>3</sup>	ISO 1183
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## Injection

Back pressure

0.7 MPa

## Characteristics

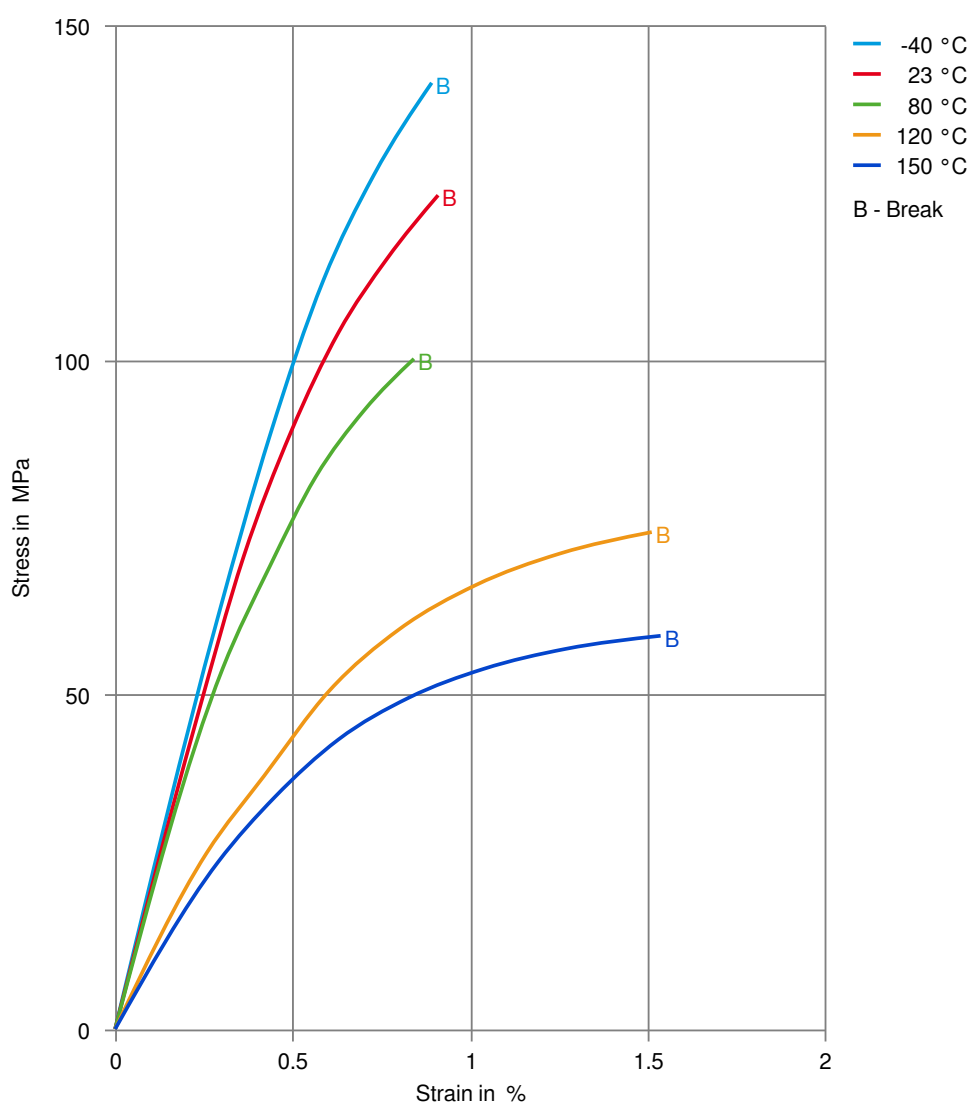
Processing

Injection Moulding

Special characteristics

Flame retardant, Light weight

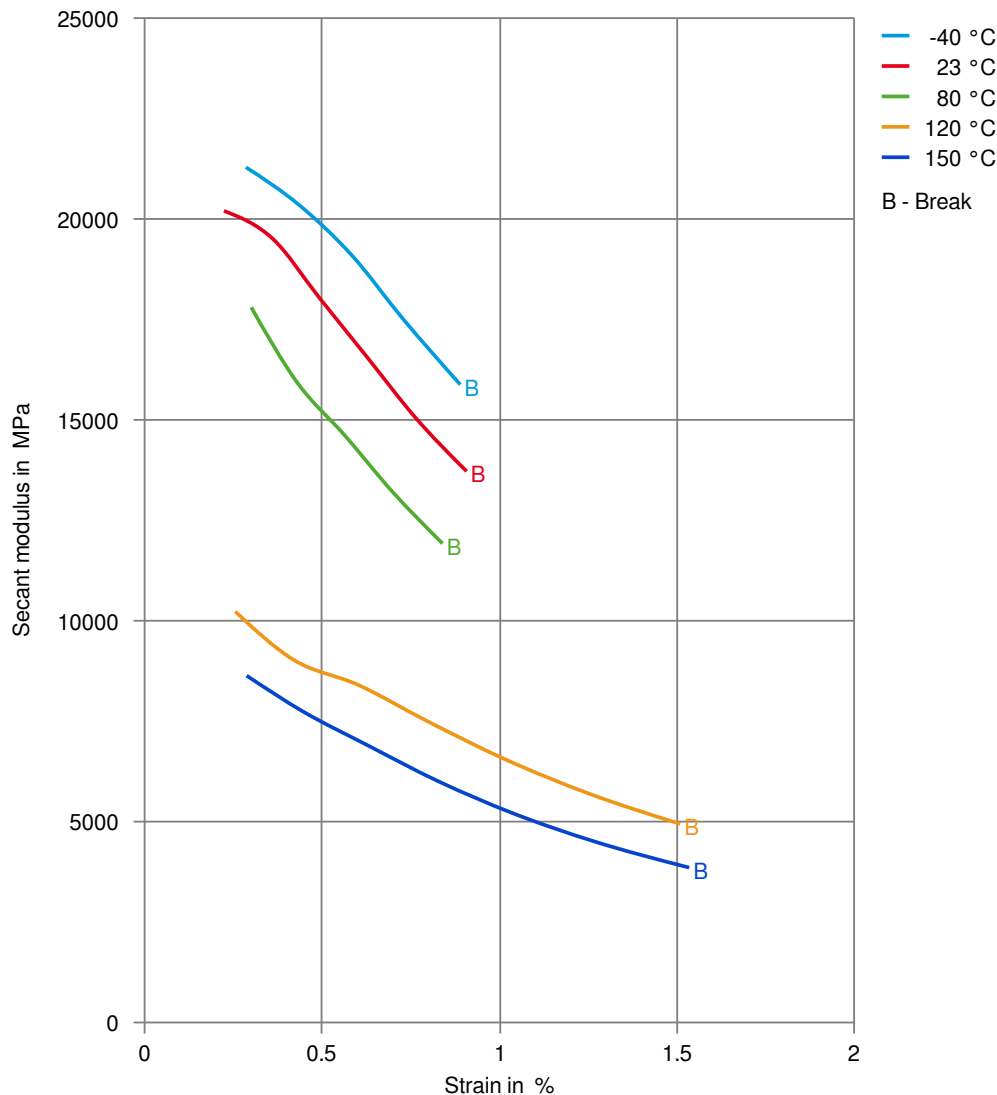
## Stress-strain



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## Secant modulus-strain



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