

COOLPOLY® D3612

COOLPOLY®

CoolPoly D series of thermally conductive plastics transfers heat, a characteristic previously unavailable in injection molding grade polymers. CoolPoly is lightweight, net-shape moldable and allows design freedom in applications previously restricted to metals and ceramics. The D series is electrically insulative and provides inherent electrical isolation characteristics.

Product information

Resin Identification	PA6	ISO 1043
Part Marking Code	>PA6<	ISO 11469

Rheological properties

Moulding shrinkage, parallel	0.4 %	ISO 294-4, 2577
Moulding shrinkage, normal	0.4 %	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	10300 MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	48 MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	0.68 %	ISO 527-1/-2
Flexural modulus	10300 MPa	ISO 178
Flexural strength	80 MPa	ISO 178
Charpy impact strength, 23°C	7.4 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	0.9 kJ/m ²	ISO 179/1eA
Poisson's ratio	0.34 ^[C]	

[C]: Calculated

Thermal properties

Temperature of deflection under load, 1.8 MPa	165 °C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	205 °C	ISO 75-1/-2
Thermal conductivity, flow	3.8 W/(m K)	ISO 22007-2
Thermal conductivity, crossflow	3.7 W/(m K)	ISO 22007-2
Thermal conductivity, through plane	1.3 W/(m K)	ISO 22007-2
Specific heat capacity of melt	1200 ^[1] J/(kg K)	ISO 22007-4

[1]: RI Data

Flammability

Burning Behav. at thickness h	V-0 class	IEC 60695-11-10
Thickness tested	3 mm	IEC 60695-11-10

Electrical properties

Relative permittivity, 1MHz	3.6	IEC 62631-2-1
Dissipation factor, 1MHz	140 E-4	IEC 62631-2-1
Volume resistivity	>1E13 Ohm.m	IEC 62631-3-1
Surface resistivity	>1E15 Ohm	IEC 62631-3-2
Comparative tracking index, 100 drops	600 ^[2]	IEC 60112

[2]: CP D3612 KF3001 Natural (PA6) CTI acc. to IEC 60112

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Physical/Other properties

Density	1620 kg/m ³	ISO 1183
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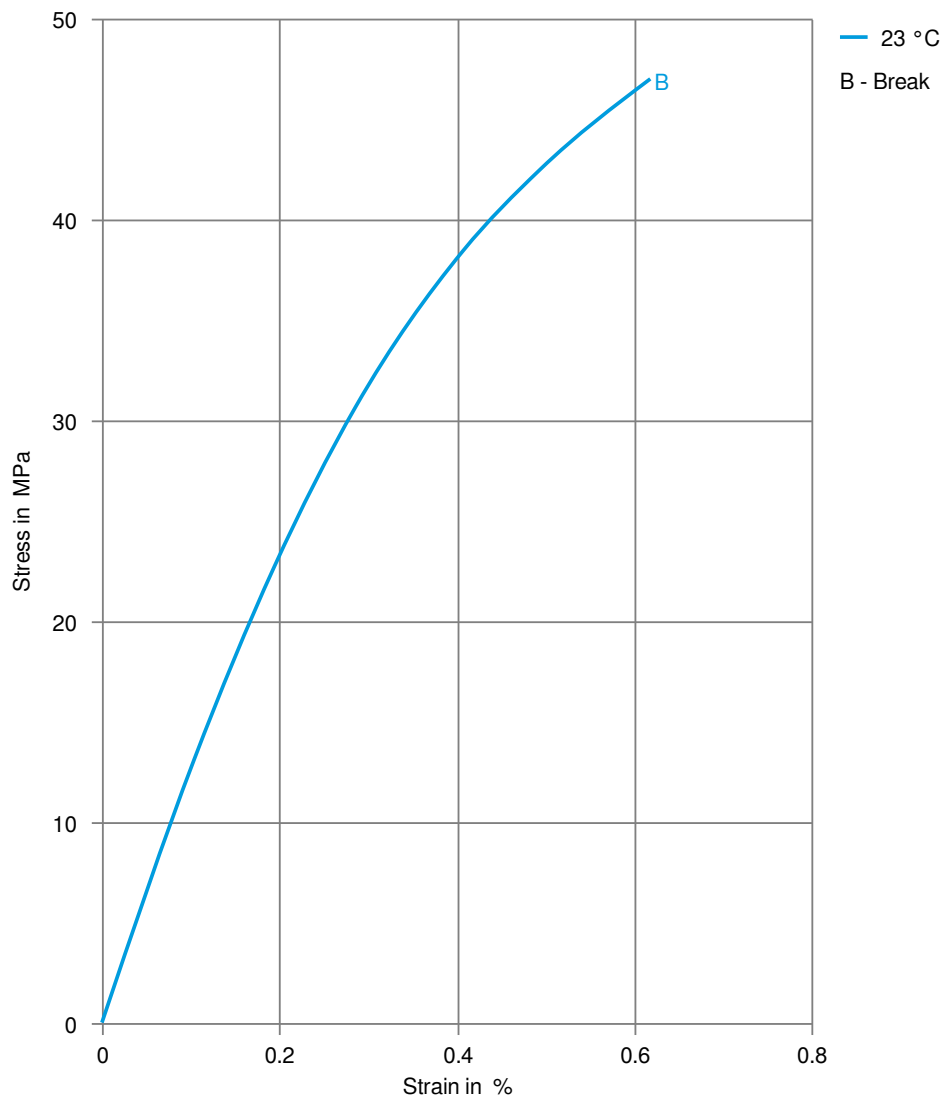
Injection

Back pressure	0.35 MPa
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Characteristics

Processing	Injection Moulding
Special characteristics	Light weight

Stress-strain



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Secant modulus-strain

