Celanese
The chemistry inside innovation™

COOLPOLY® D8102

CoolPoly D8102 is a thermally conductive, electrically non-conductive TPE based grade
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.

Typical mechanical properties

Tensile Modulus	7	MPa	ISO 527-1/-2
Stress at break, 5mm/min	1.7	MPa	ISO 527-1/-2
Strain at break, 5mm/min	78.7	%	ISO 527-1/-2
Poisson's ratio	0.44		
Shore A hardness, 3s	56		ISO 48-4 / ISO 868

Thermal properties

Thermal conductivity in plane, in flow	2.8	W/(m K)	ASTM E 1461
Thermal conductivity in plane, cross flow	3.2	W/(m K)	ASTM E 1461
Thermal conductivity through plane	1.3	W/(m K)	ASTM E 1461

Flammability

Burning Behav. at thickness h	HB	class	UL 94
Thickness tested	1.36	mm	UL 94

Other properties

Density	1200	kg/m^3	ISO 1183

Injection

Drying Temperature	65	°C
Drying Time, Dehumidified Dryer	1 - 2	h
Max. mould temperature	20 - 50	°C
Back pressure	1	MPa
Injection speed	medium-fast	

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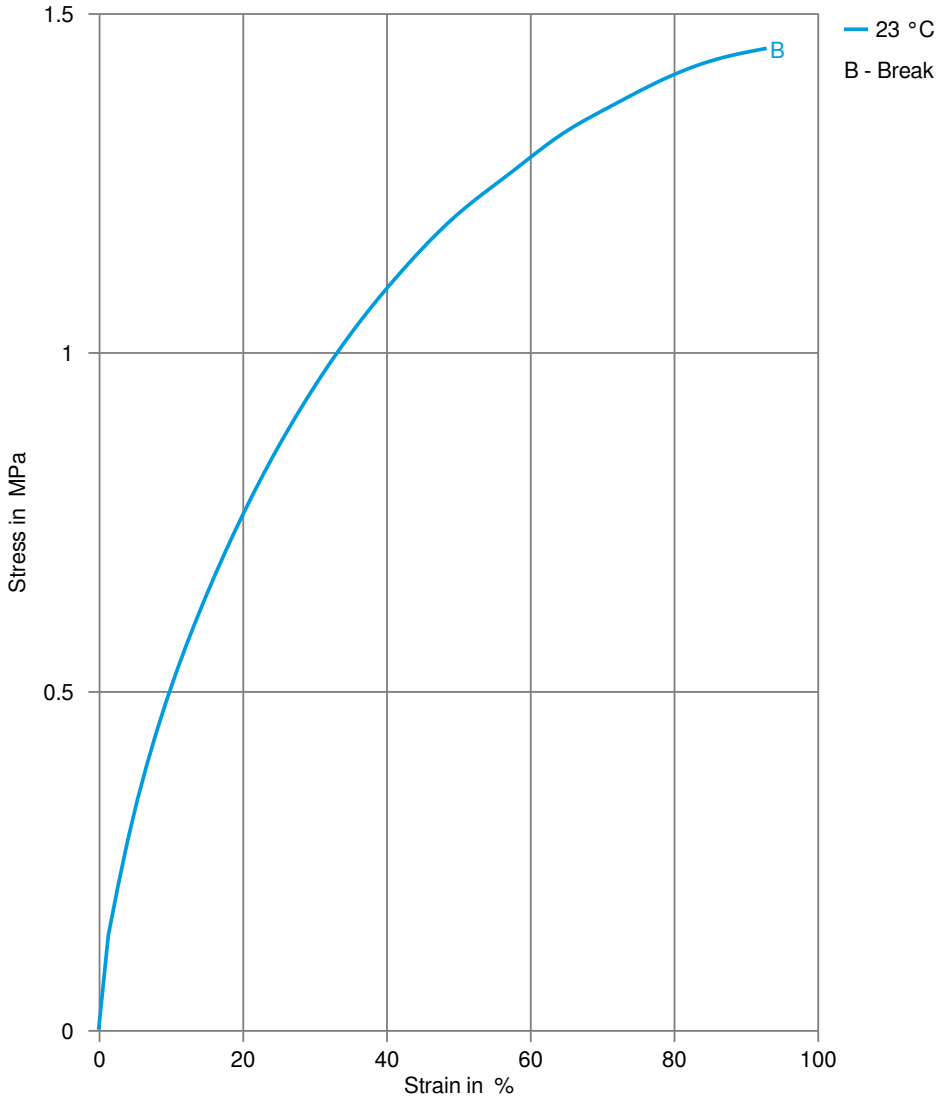
Stress-strain



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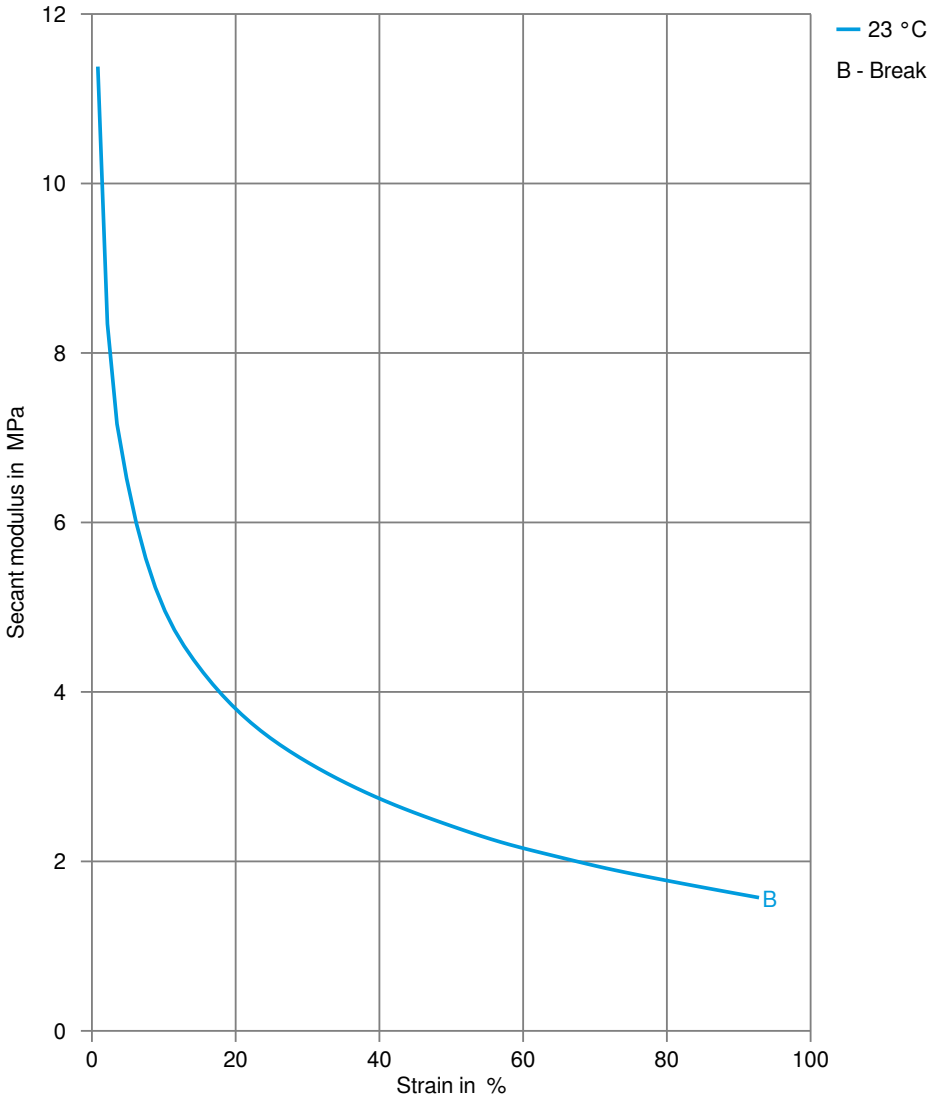
Secant modulus-strain



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True stress-strain