Celanese
The chemistry inside innovation™

KEPITAL® F40-34

An Ultra low-viscosity grade for general injection molding
- A standard unfilled and extra easy-flowing (ultra low-viscosity) grade for general injection molding
- Suitable for multi-cavity molds and thin-walled precision parts

Rheological properties

Moulding shrinkage, parallel	2.0	%	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	2900	MPa	ISO 527-1/-2
Yield stress, 50mm/min	65	MPa	ISO 527-1/-2
Yield strain, 50mm/min	7	%	ISO 527-1/-2
Nominal strain at break	13	%	ISO 527-1/-2
Flexural Modulus	2700	MPa	ISO 178
Flexural Strength	93	MPa	ISO 178
Charpy notched impact strength, 23°C	3.5	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	2.2	kJ/m²	ISO 179/1eA
Poisson's ratio	0.418		

Thermal properties

Melting temperature, 10°C/min	165	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	101	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	120	E-6/K	ISO 11359-1/-2

Electrical properties

Volume resistivity	1E12	Ohm.m	IEC 62631-3-1
Surface resistivity	1E16	Ohm	IEC 62631-3-2
Electric strength	19	kV/mm	IEC 60243-1

Other properties

Humidity absorption, 2mm	0.2	%	Sim. to ISO 62
Density	1410	kg/m³	ISO 1183

Injection

Drying Temperature	80 - 90	°C
Drying Time, Dehumidified Dryer	3 - 4	h
Processing Moisture Content	0.1	%
Max. mould temperature	60 - 80	°C
Back pressure	2	MPa

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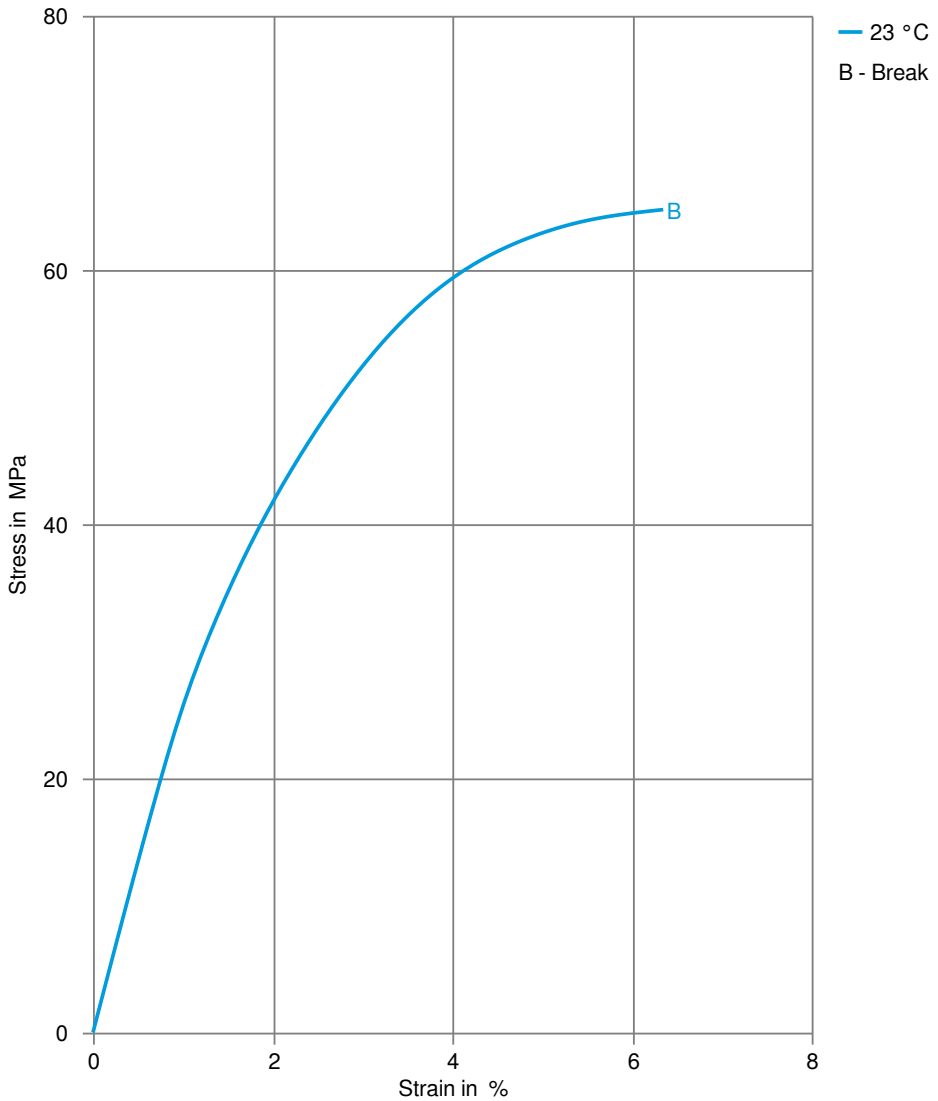
Additional information

Injection molding	mold temperature: 60ºC ~ 80ºC (140ºF ~ 160ºF) barrel temperature: 170ºC ~ 210ºC (338ºF ~ 410ºF) screw speed: 150mm/s ~ 200mm/s back pressure: max. 20bar

Stress-strain



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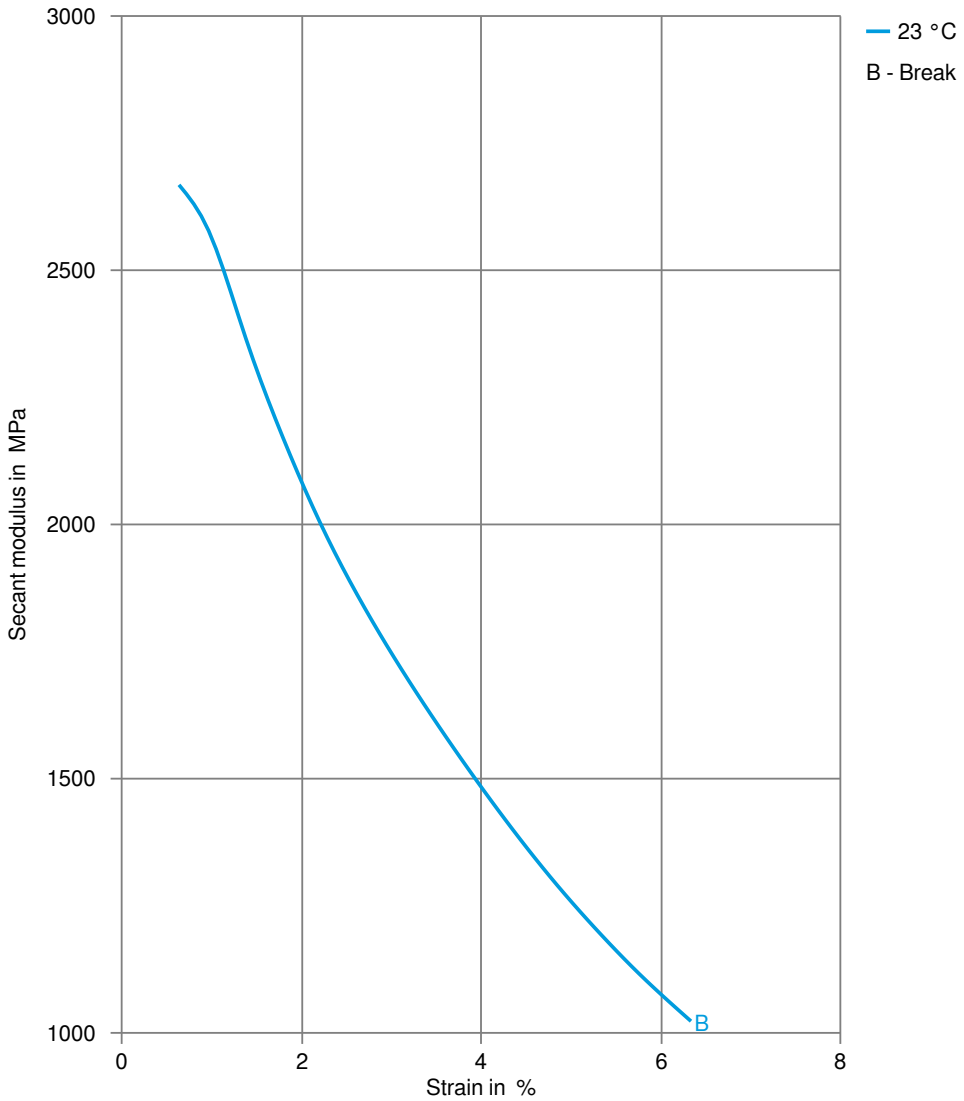
Secant modulus-strain



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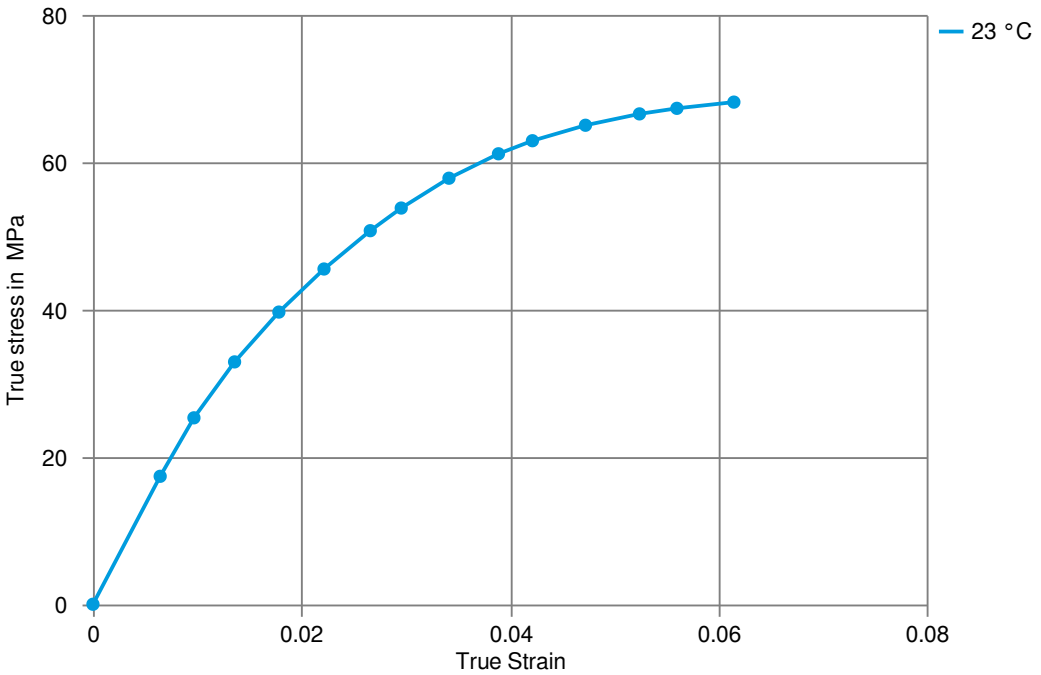
True stress-strain



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Processing Texts

Pre-drying	suggested pre-drying condition: 80 ºC ~ 90 ºC (176ºF ~ 194ºF) 3 h ~ 4 h suggested max. moisture:0.1%
Injection molding	mold temperature: 60ºC ~ 80ºC (140ºF ~ 160ºF) barrel temperature: 170ºC ~ 210ºC (338ºF ~ 410ºF) screw speed: 150mm/s ~ 200mm/s back pressure: max. 20bar

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