Celanese
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HOSTAFORM® C 2521

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Chemical abbreviation according to ISO 1043-1: POM
Molding compound ISO 29988- POM-K, M-GNR, 01-002

POM copolymer

Stiff-flowing type for injection molding and extrusion with high impact toughness and good tracking resistance over a high range of temperature; good chemical resistance to solvents, fuel and strong alkalis as well as good hydrolysis resistance; high resistance to thermal and oxidative degradation.

Monomers and additives are listed in EU-Regulation (EU) 10/2011 FDA compliant according to 21 CFR 177.2470
Burning rate ISO 3795 and FMVSS 302 < 75 mm/min for a thickness more than 1 mm.

Ranges of applications: injection molding thick-walled, void-free molded parts; extrusion e.g. for boards and pipes.
FDA = Food and Drug Administration (USA)
FMVSS = Federal Motor Vehicle Safety Standard (USA)

Product information

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

Rheological properties

Melt volume-flow rate	2.5	cm^3/10min	ISO 1133
Temperature	190	°C	
Load	2.16	kg	
Melt mass-flow rate	2.8	g/10min	ISO 1133
Melt mass-flow rate, Temperature	190	°C	
Melt mass-flow rate, Load	2.16	kg	
Moulding shrinkage, parallel	2.1	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.8	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	2600	MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	62	MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min	9	%	ISO 527-1/-2
Nominal strain at break	32	%	ISO 527-1/-2
Flexural modulus	2500	MPa	ISO 178
Flexural stress at 3.5%	66	MPa	ISO 178
Tensile creep modulus, 1h	2300	MPa	ISO 899-1
Tensile creep modulus, 1000h	1100	MPa	ISO 899-1
Charpy impact strength, 23°C	250[P]	kJ/m^2	ISO 179/1eU
Charpy impact strength, -30°C	250	kJ/m^2	ISO 179/1eU
Charpy notched impact strength, 23°C	8.5	kJ/m^2	ISO 179/1eA
Charpy notched impact strength, -30°C	7	kJ/m^2	ISO 179/1eA
Ball indentation hardness, H 358/30	144	MPa	ISO 2039-1
Poisson's ratio	0.38[C]		

[P]: Partial Break

[C]: Calculated

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Thermal properties

Melting temperature, 10 °C/min	165	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	101	°C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	110	E-6/K	ISO 11359-1/-2
Thermal conductivity of melt	0.155	W/(m K)	ISO 22007-2
Specific heat capacity of melt	2210	J/(kg K)	ISO 22007-4

Flammability

Burning Behav. at 1.5mm nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	1.5	mm	IEC 60695-11-10
Burning Behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	3	mm	IEC 60695-11-10
UL recognition	yes		UL 94
FMVSS Class	B		ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	33.9	mm/min	ISO 3795 (FMVSS 302)

Electrical properties

Relative permittivity, 100Hz	4		IEC 62631-2-1
Relative permittivity, 1MHz	4		IEC 62631-2-1
Dissipation factor, 100Hz	15	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	50	E-4	IEC 62631-2-1
Volume resistivity	1E12	Ohm.m	IEC 62631-3-1
Surface resistivity	1E14	Ohm	IEC 62631-3-2
Electric strength	35	kV/mm	IEC 60243-1
Comparative tracking index	600		IEC 60112

Physical/Other properties

Humidity absorption, 2mm	0.2	%	Sim. to ISO 62
Water absorption, 2mm	0.65	%	Sim. to ISO 62
Density	1410	kg/m³	ISO 1183

Injection

Drying Recommended	no	
Drying Temperature	100	°C
Drying Time, Dehumidified Dryer	3 - 4	h
Processing Moisture Content	≤0.2	%
Melt Temperature Optimum	200	°C
Min. melt temperature	190	°C
Max. melt temperature	210	°C
Screw tangential speed	≤0.3	m/s
Mold Temperature Optimum	100	°C
Min. mould temperature	80	°C
Max. mould temperature	120	°C
Hold pressure range	60 - 120	MPa
Back pressure	4	MPa
Ejection temperature	130	°C

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Characteristics

Processing	Injection Moulding, Film Extrusion, Extrusion, Sheet Extrusion, Other Extrusion, Blow Moulding
Delivery form	Pellets
Additives	Release agent

Additional information

Injection molding

Preprocessing

General drying is not necessary due to low moisture absorption of the resin.

In case of bad storage conditions (water contact or condensed water) the use of a recirculating air dryer (100 to 120 °C / max. 40 mm layer / 3 to 6 hours) is recommended.

Max. Water content 0,2 %

Processing

Standard injection moulding machines with three phase (15 to 25 D) plasticating screws will fit.

Postprocessing

Conditioning e.g. moisturizing is not necessary.

Film extrusion

Preprocessing

General drying is not necessary due to low moisture absorption of the resin.

In case of bad storage conditions (water contact or condensed water) the use of a recirculating air dryer (100 to 120 °C / max. 40 mm layer / 3 to 6 hours) is recommended.

Max. Water content 0,2 %

Processing

Standard extruders with grooved feed zone and short compression screws (minimum 25 D) will fit.

Melt temperature 180-190 °C

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Postprocessing

Conditioning e.g. moisturizing is not necessary.

In case of very thick wall thickness profiles after-annealing it is recommended to reduce internal stress.

Annealing temperature 130-140 °C
Annealing time 10 min/mm thickness

Other extrusion

Preprocessing

General drying is not necessary due to low moisture absorption of the resin.

In case of bad storage conditions (water contact or condensed water) the use of a recirculating air dryer (100 to 120 °C / max. 40 mm layer / 3 to 6 hours) is recommended.

Max. Water content 0,2 %

Processing

Standard extruders with grooved feed zone and short compression screws (minimum 25 D) will fit.

Melt temperature 180-190 °C

Postprocessing

Conditioning e.g. moisturizing is not necessary.

In case of very thick wall thickness profiles after-annealing it is recommended to reduce internal stress.

Annealing temperature 130-140 °C
Annealing time 10 min/mm thickness

Profile extrusion

Preprocessing

General drying is not necessary due to low moisture absorption of the resin.

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In case of bad storage conditions (water contact or condensed water) the use of a recirculating air dryer (100 to 120 °C / max. 40 mm layer / 3 to 6 hours) is recommended.

Max. Water content 0,2 %

Processing

Standard extruders with grooved feed zone and short compression screws (minimum 25 D) will fit.

Melt temperature 180-190 °C

Postprocessing

Conditioning e.g. moisturizing is not necessary.

In case of very thick wall thickness profiles after-annealing it is recommended to reduce internal stress.

Annealing temperature 130-140 °C
Annealing time 10 min/mm thickness

Sheet extrusion

Preprocessing

General drying is not necessary due to low moisture absorption of the resin.

In case of bad storage conditions (water contact or condensed water) the use of a recirculating air dryer (100 to 120 °C / max. 40 mm layer / 3 to 6 hours) is recommended.

Max. Water content 0,2 %

Processing

Standard extruders with grooved feed zone and short compression screws (minimum 25 D) will fit.

Melt temperature 180-190 °C

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Postprocessing

Conditioning e.g. moisturizing is not necessary.

In case of very thick wall thickness profiles after-annealing it is recommended to reduce internal stress.

Annealing temperature 130-140 °C
Annealing time 10 min/mm thickness

Blow molding

Preprocessing

General drying is not necessary due to low moisture absorption of the resin.

In case of bad storage conditions (water contact or condensed water) the use of a recirculating air dryer (100 to 120 °C / max. 40 mm layer / 3 to 6 hours) is recommended.

Max. Water content 0,2 %

Processing

Standard extruders with plasticating screws (20 to 25 D) will fit.

Melt temperature 180-190 °C
Mould-surface temperature 60-100 °C

Postprocessing

Conditioning e.g. moisturizing is not necessary.

Processing Notes

Pre-Drying

Drying is not normally required. If material has come in contact with moisture through improper storage or handling or through regrind use, drying may be necessary to prevent splay and odor problems.

Storage

The product can then be stored in standard conditions until processed.

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Automotive

OEM	STANDARD	ADDITIONAL INFORMATION
BMW	GS93016	
Bosch	N28 BN22-O004	Black, Made In Frankfurt
Bosch	N28 BN22-O004	Natural, Made In Frankfurt
Bosch	N28 BN22-O004	Red, Made In Frankfurt
Bosch	N28 BN22-O004	Colors
Continental	TST N 055 54.07	
Ford	WSK-M4D635-A1	
General Motors	Natural, Special Parts Approval, See Your CE Account Representative for Further Details.	
Mercedes-Benz	DBL5403	(5403.00)
Mercedes-Benz	DBL5405	(5405.01)
Mercedes-Benz	DBL5405-06-POM-C	'Polyoxymethylene Copolymer'
Mercedes-Benz	DBL5410	(5410.00)
Mercedes-Benz	DBL5420	(5420.00)
Nissan	POM-IVx-1	
Stellantis	MS.50210 / POM-C.2400F.6C.LF	Technical Black;POM 100.65

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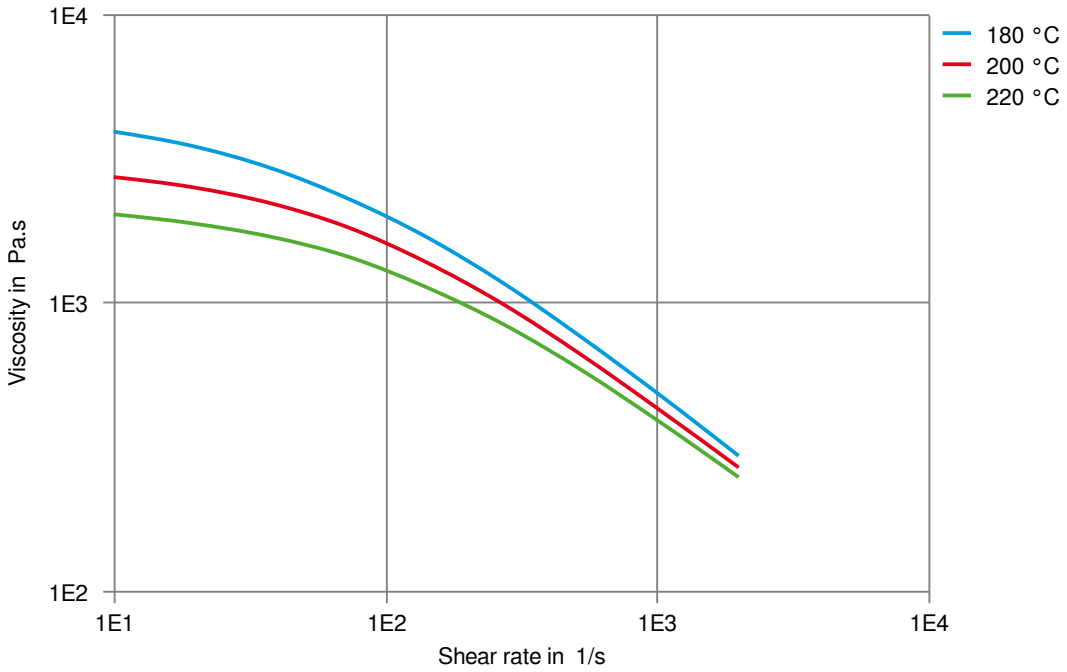
Viscosity-shear rate



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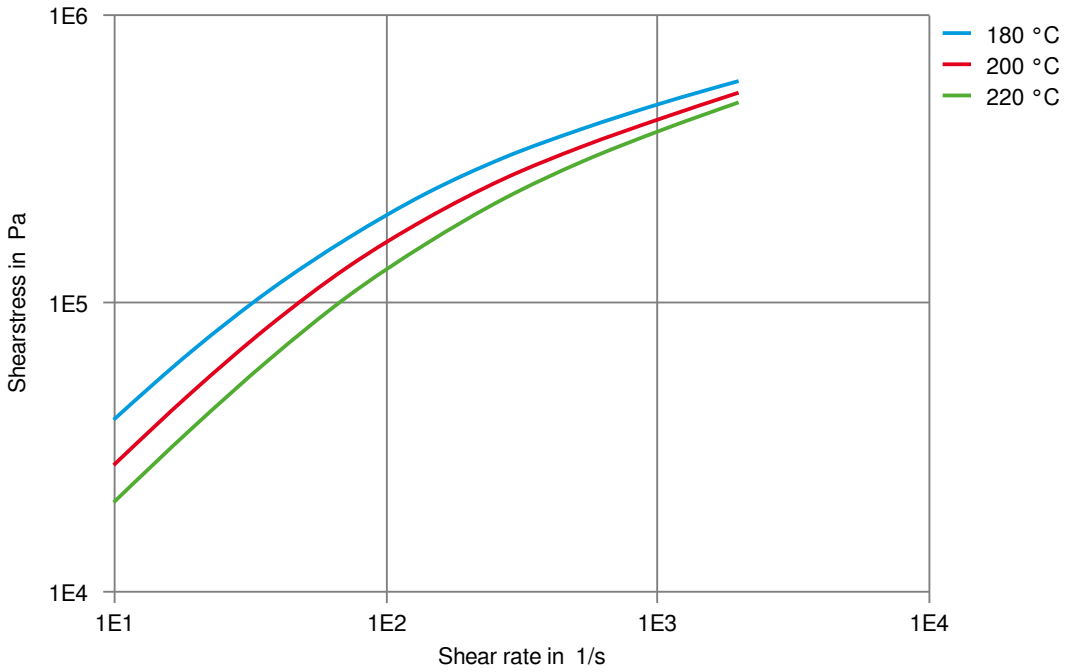
Shearstress-shear rate



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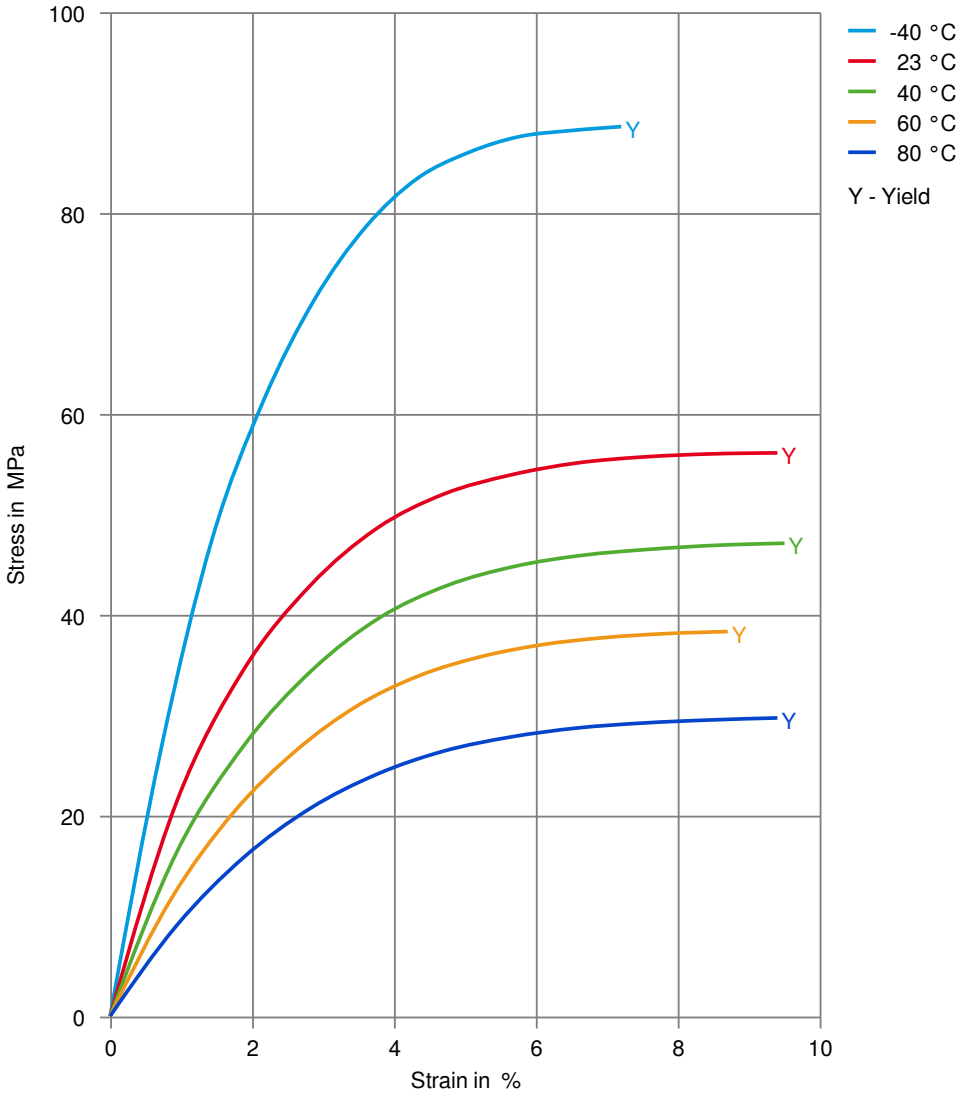
Stress-strain



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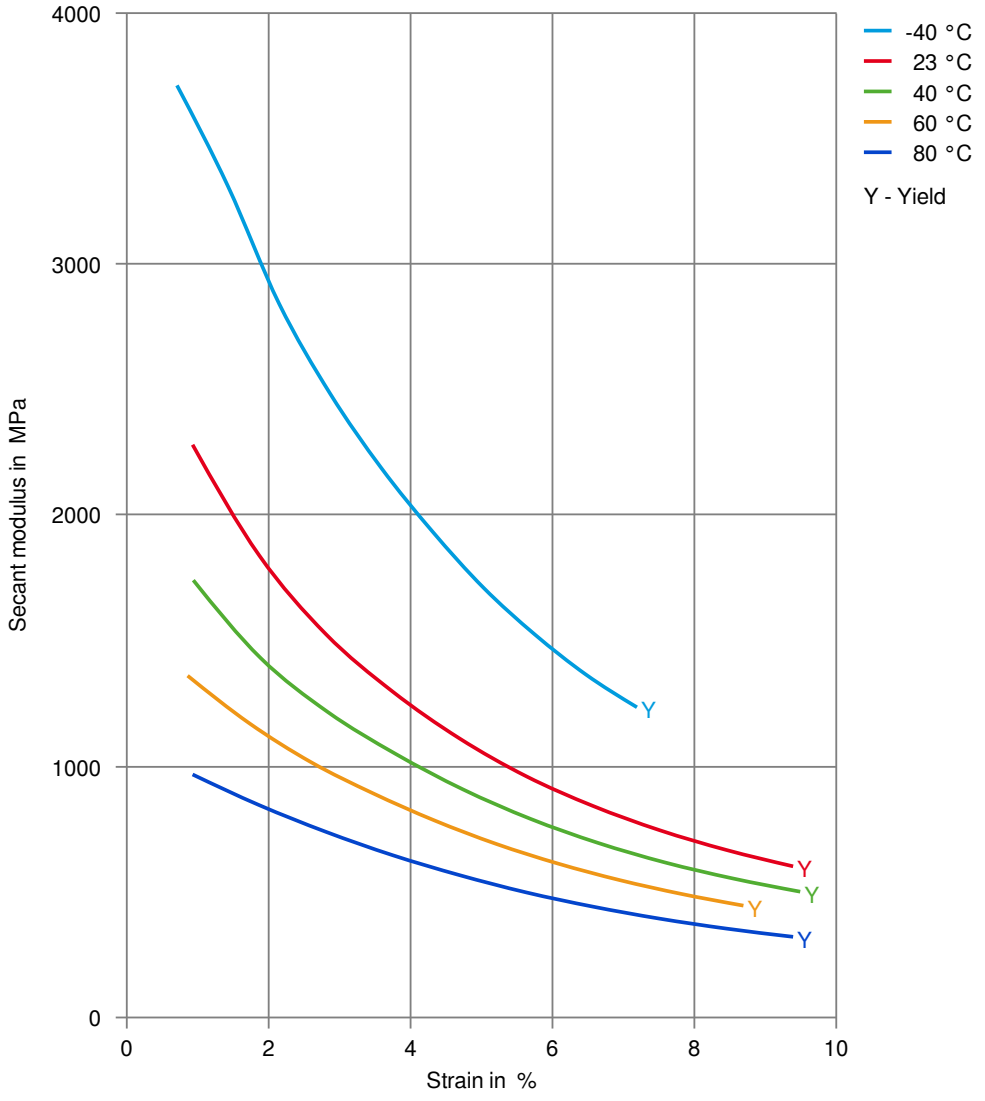
Secant modulus-strain



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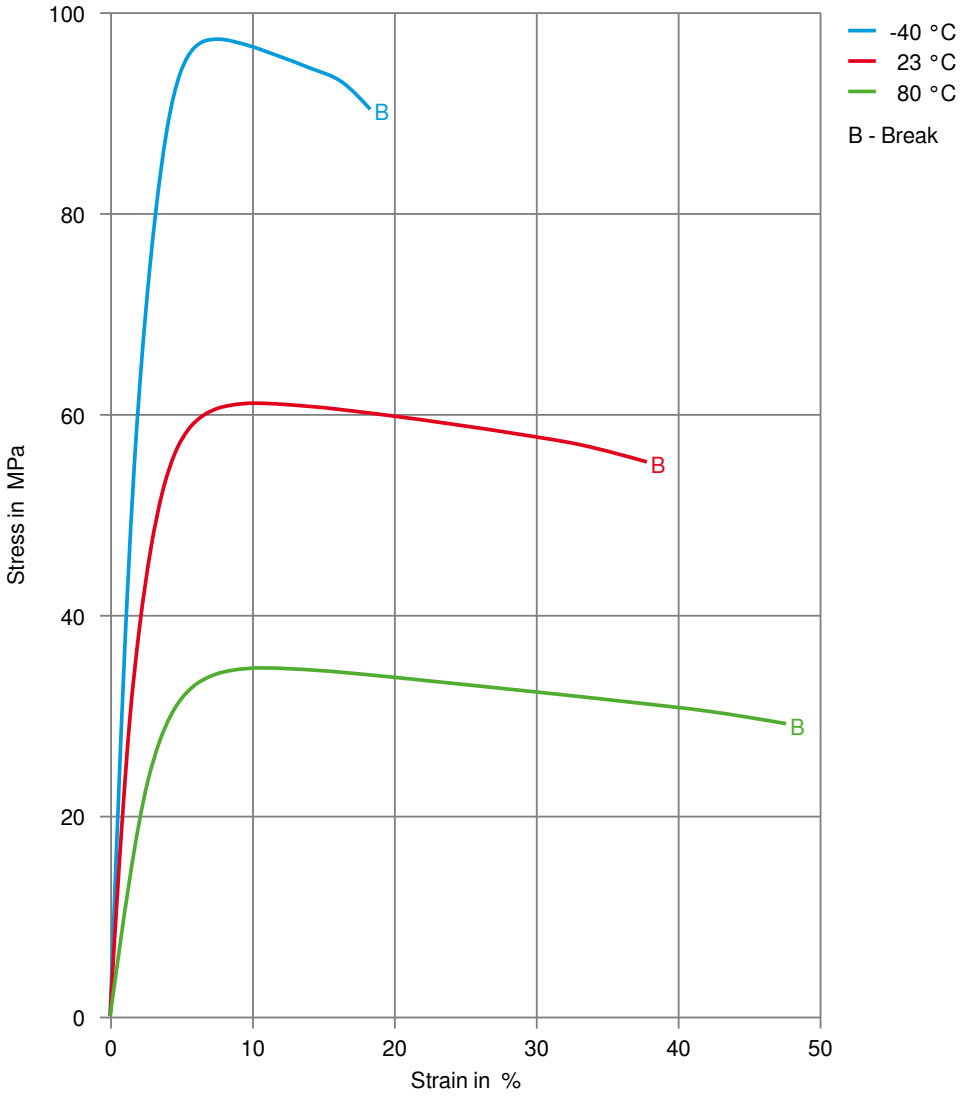
Stress-strain, 50mm/min



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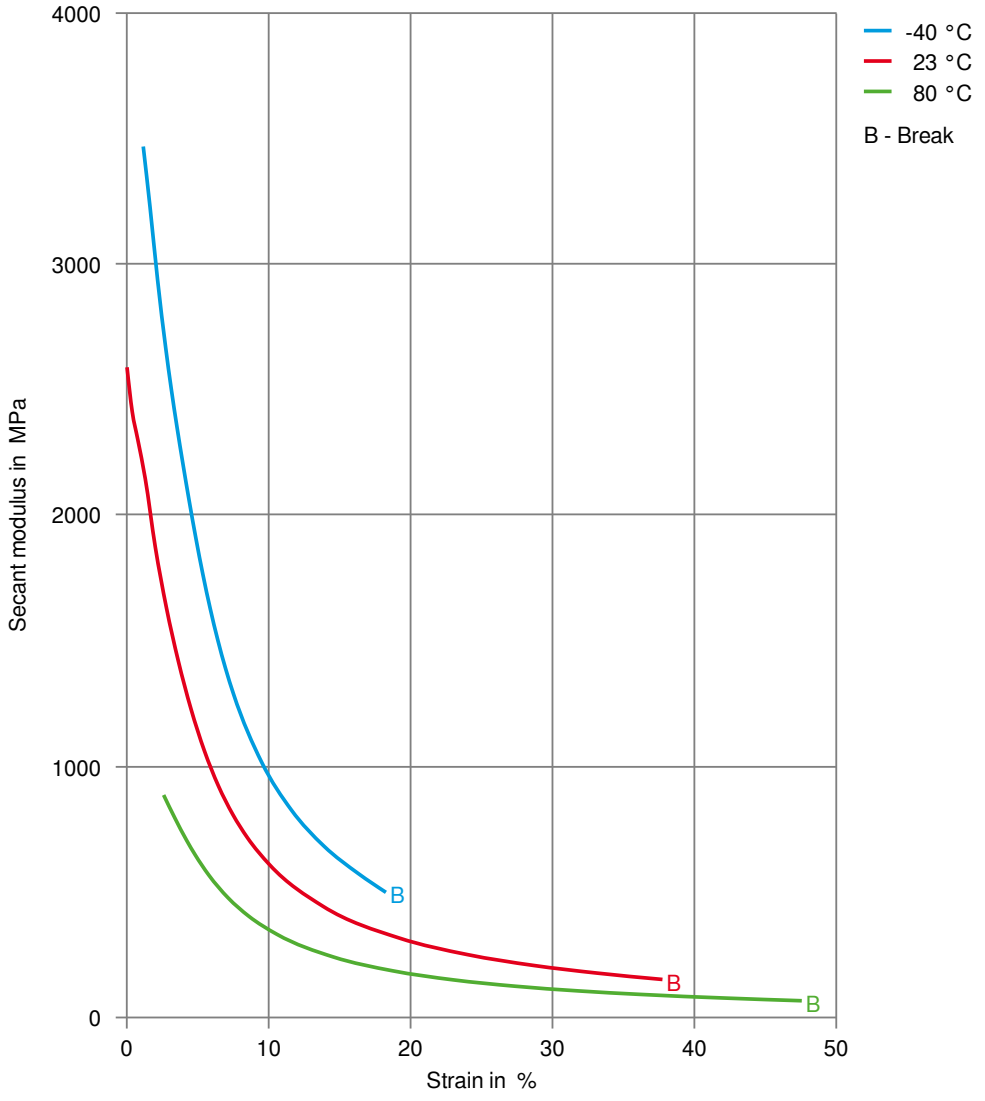
Secant modulus-strain, 50mm/min



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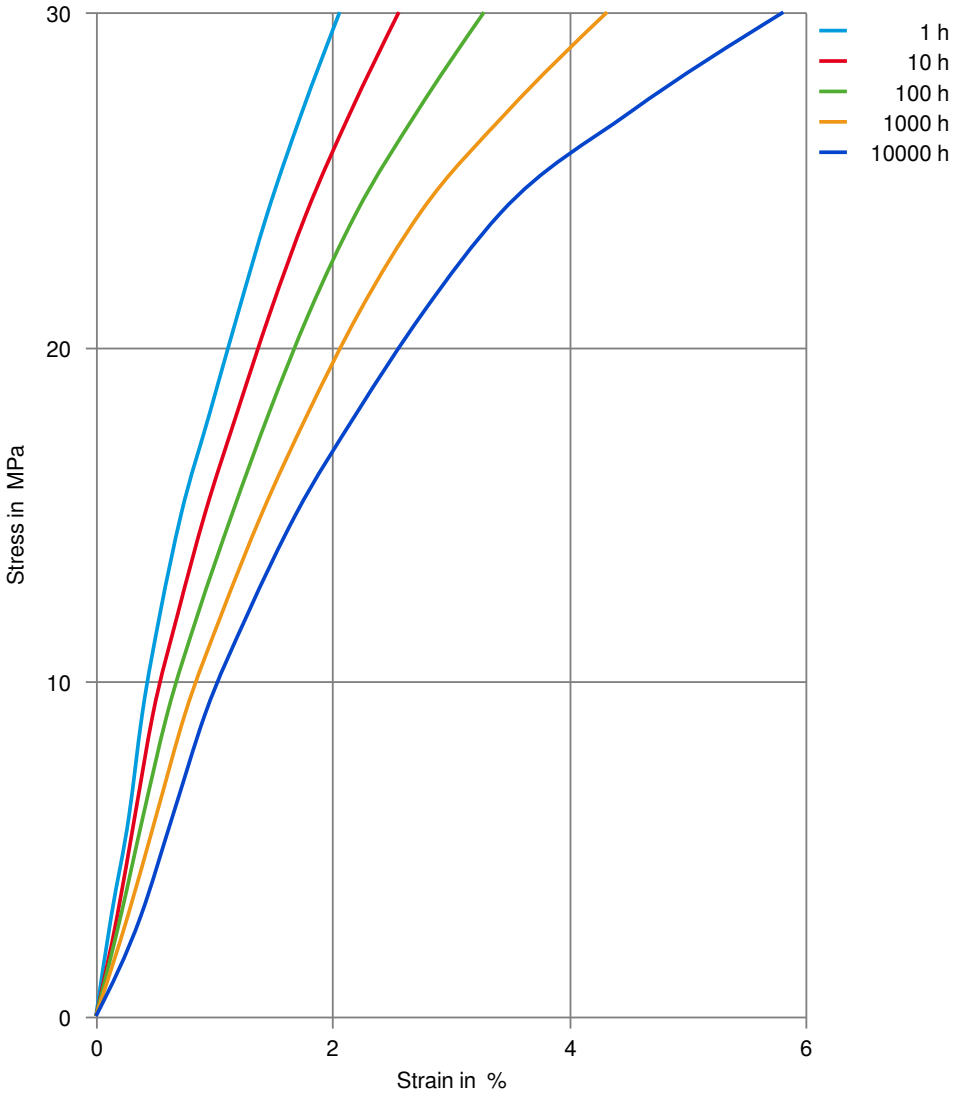
Stress-strain (isochronous) 23 °C



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