Celanese
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HOSTAFORM® C 9021 K

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Chemical abbreviation according to ISO 1043-1: POM Molding compound ISO 29988- POM-K, M-GNR, 03-002, K5 POM copolymer Injection molding type, with special chalk modified; good wear properties; good chemical resistance to solvents, fuel and strong alkalis as well as good hydrolysis resistance; high resistance to thermal and oxidative degradation. UL-registration in natural and a thickness more than 1.57 mm as UL 94 HB, temperature index UL 746 B electrical 105 °C, mechanical 90 °C (tensile impact) and 80 °C (tensile). Burning rate ISO 3795 and FMVSS 302 < 100 mm/min for a thickness more than 1 mm. Ranges of applications: for unlubricated or once-only-lubricant sliding Parts. FMVSS = Federal Motor Vehicle Safety Standard (USA) UL = Underwriters Laboratories (USA)

Product information

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

Rheological properties

Melt volume-flow rate	7.5	cm^3/10min	ISO 1133
Temperature	190	°C	
Load	2.16	kg	
Moulding shrinkage, parallel	2.1[1]	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.8[1]	%	ISO 294-4, 2577

[1]: @ 195°C

Typical mechanical properties

Tensile modulus	3000	MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	60	MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min	8	%	ISO 527-1/-2
Nominal strain at break	22	%	ISO 527-1/-2
Flexural modulus	2900	MPa	ISO 178
Tensile creep modulus, 1h	2500	MPa	ISO 899-1
Tensile creep modulus, 1000h	1400	MPa	ISO 899-1
Charpy impact strength, 23°C	100	kJ/m^2	ISO 179/1eU
Charpy impact strength, -30°C	100	kJ/m^2	ISO 179/1eU
Charpy notched impact strength, 23°C	5	kJ/m^2	ISO 179/1eA
Charpy notched impact strength, -30°C	5	kJ/m^2	ISO 179/1eA
Ball indentation hardness, H 358/30	145	MPa	ISO 2039-1
Poisson's ratio	0.37[C]		

[C]: Calculated

Thermal properties

Melting temperature, 10°C/min	166	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	100	°C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	110	E-6/K	ISO 11359-1/-2
Thermal conductivity of melt	0.195	W/(m K)	ISO 22007-2
Specific heat capacity of melt	2060	J/(kg K)	ISO 22007-4

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Flammability

Burning Behav. at 1.5mm nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	1.6	mm	IEC 60695-11-10
Burning Behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	3.18	mm	IEC 60695-11-10
UL recognition	yes		UL 94

Electrical properties

Relative permittivity, 100Hz	4.2		IEC 62631-2-1
Relative permittivity, 1MHz	4.2		IEC 62631-2-1
Dissipation factor, 100Hz	25	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	60	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	1440	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	2	MPa
Ejection temperature	140	°C

Characteristics

Processing	Injection Moulding, Other Extrusion
Delivery form	Pellets
Additives	Release agent
Special characteristics	Low wear / Low friction

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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.

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.

Automotive

OEM	STANDARD	ADDITIONAL INFORMATION
BMW	GS93016	
Bosch	N28 BN22-X016	Natural
Continental	TST N 055 54.09	

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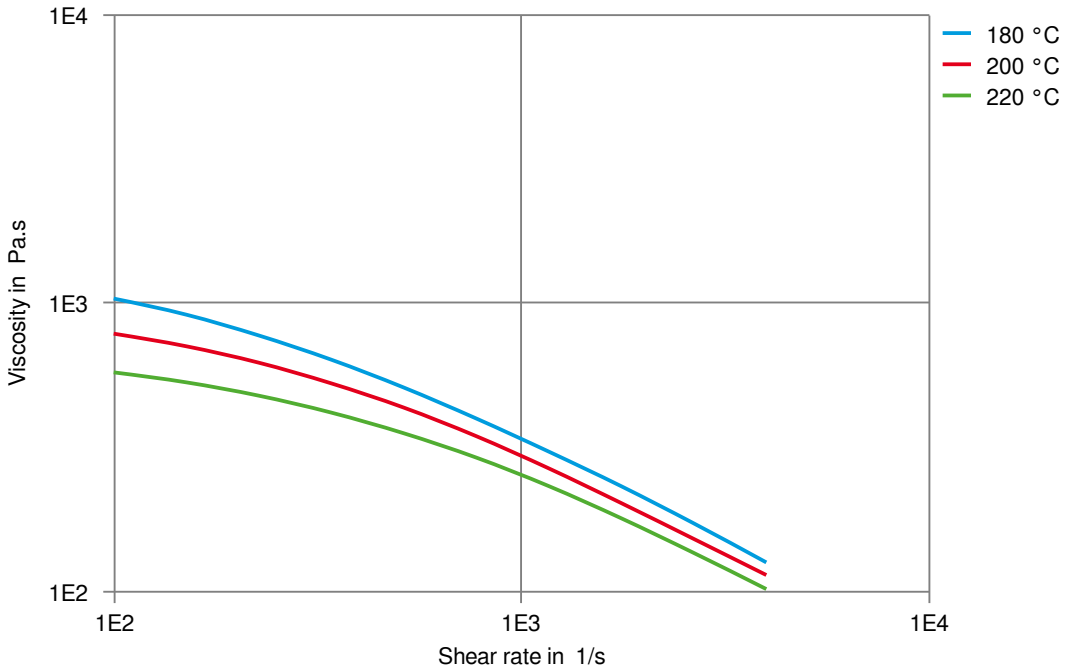
Viscosity-shear rate



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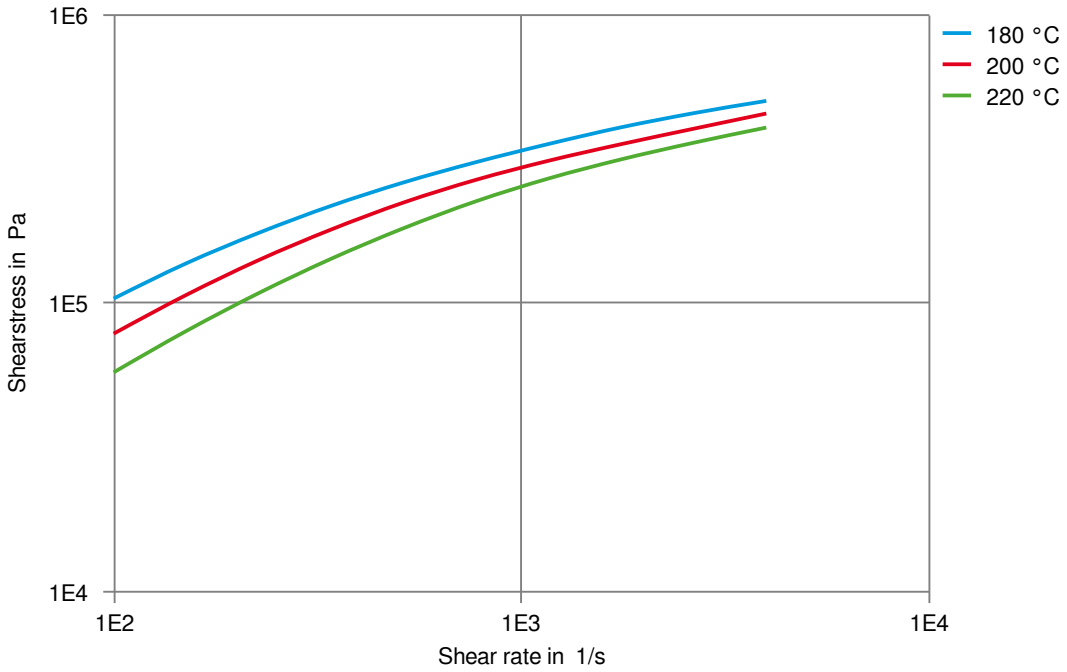
Shearstress-shear rate



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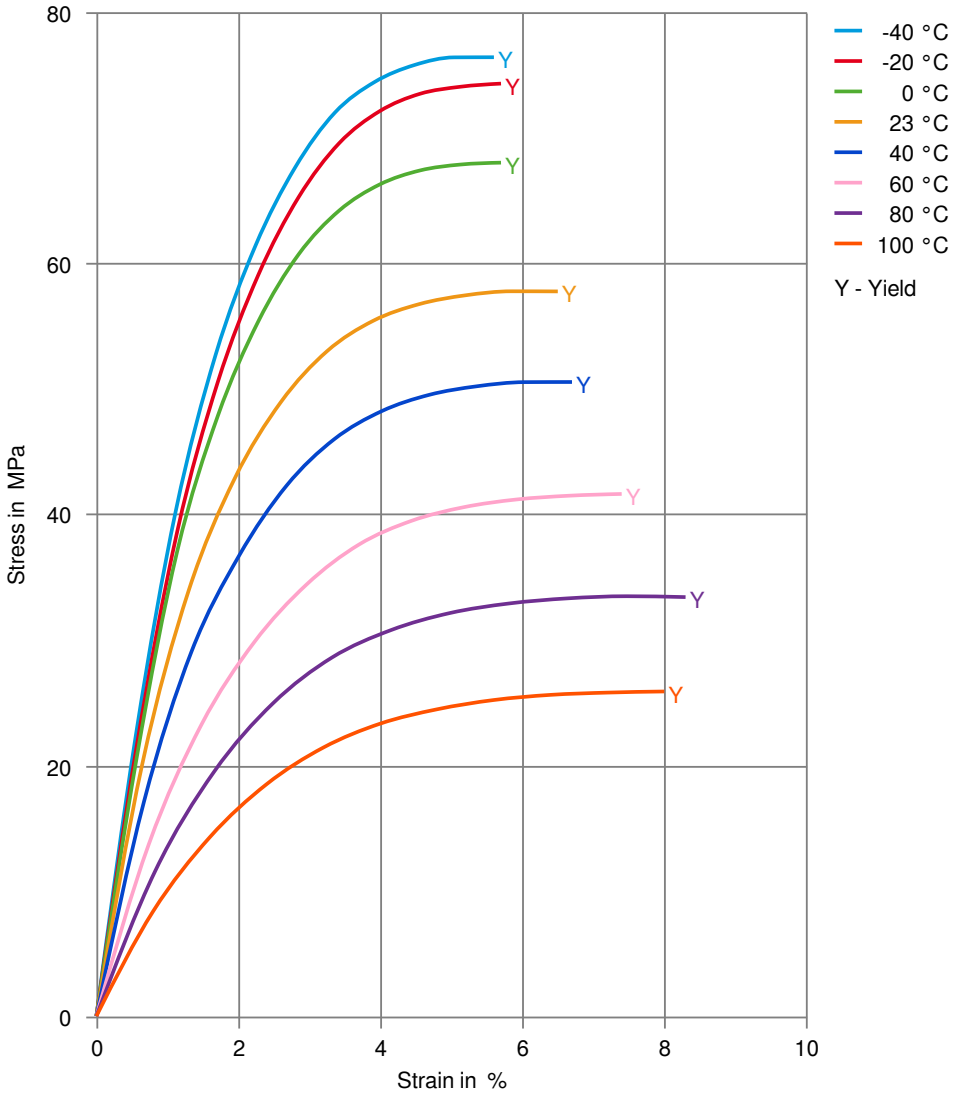
Stress-strain



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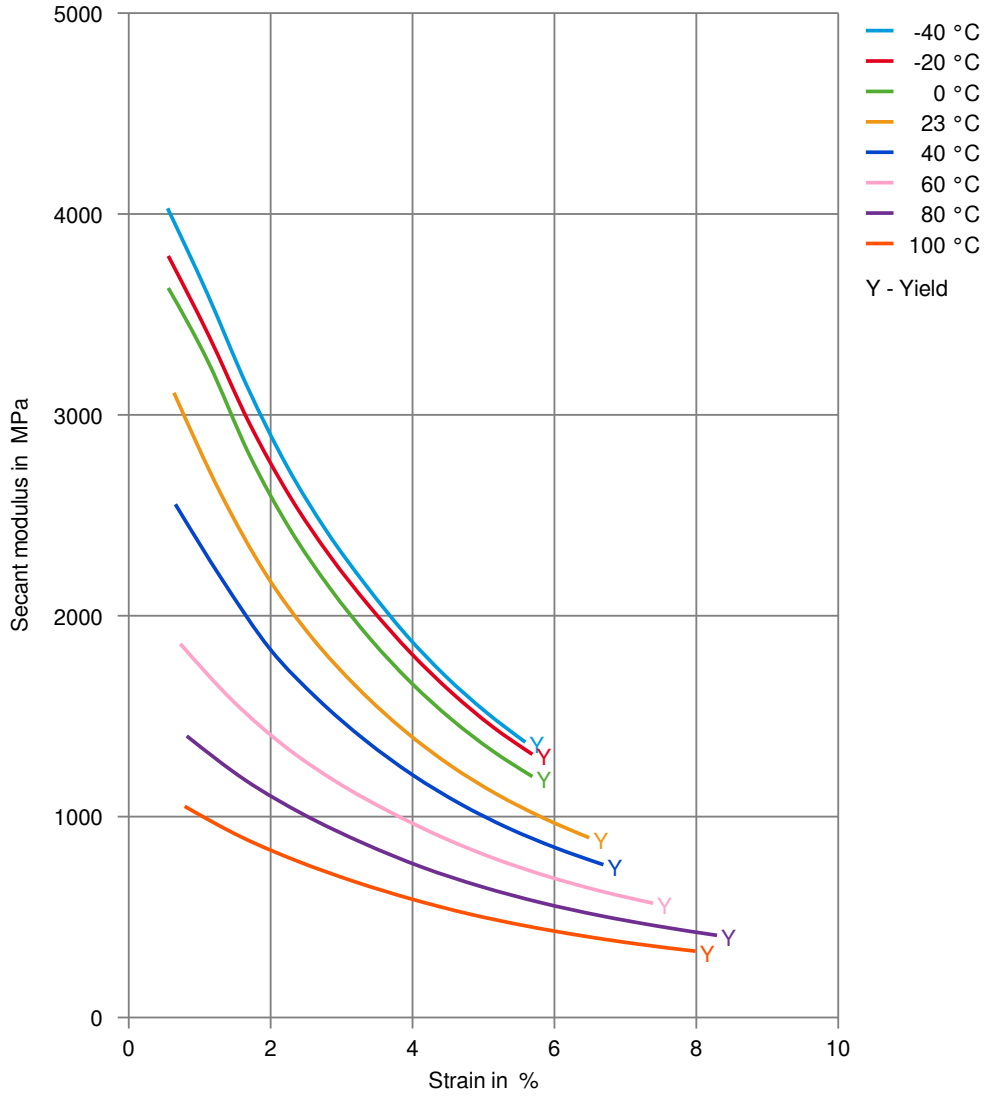
Secant modulus-strain



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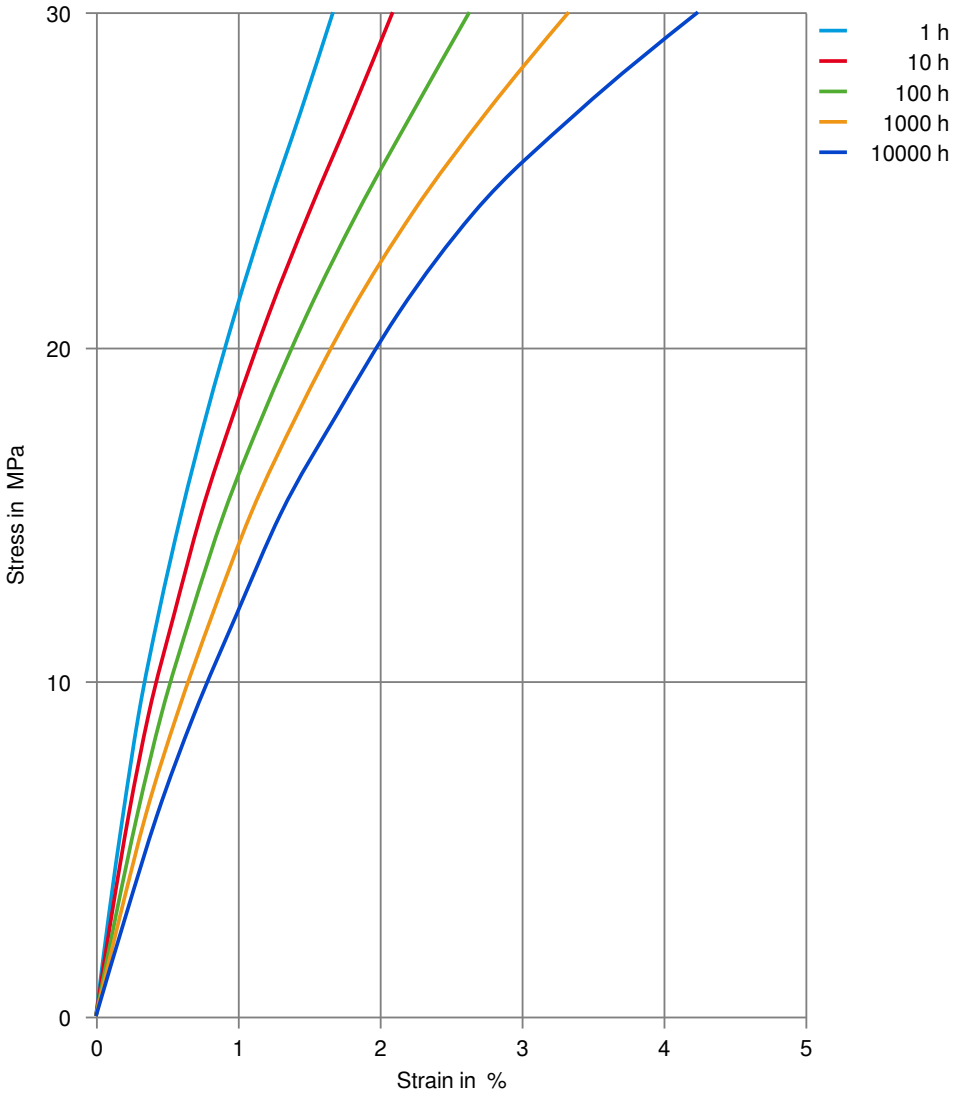
Stress-strain (isochronous) 23 °C



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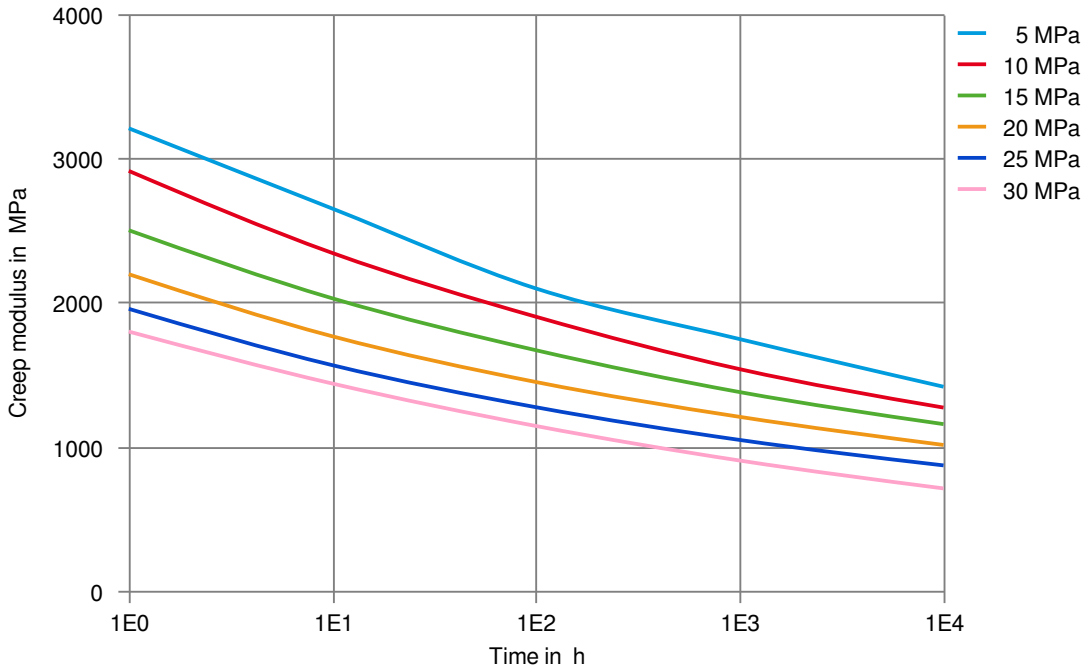
Creep modulus-time 23 °C



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