

HOSTAFORM® C 52021

Injection molding grade with extremely high flow

Chemical abbreviation according to ISO 1043-1: POM Molding compound ISO 29988- POM-K, M-GNR, 06-002 POM copolymer Extremely easy flowing Injection molding type for very thin-walled precision molded parts with unfavourable flow-path-wallthickness relation; permits processing at reduced temperature and also shorter cycle times; for mechanical lower requirements; 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 UL-registration in natural a thickness more than 0.81 mm, in black a thickness more than 1.5 mm as UL 94 HB, temperature index UL 746 B for a thickness of 1.5 mm, electrical 105 °C, mechanical 90 °C Burning rate ISO 3795 and FMVSS 302 < 75 mm/min for a thickness more than 1 mm. Ranges of applications: For very thin-walled precision molded parts with unfavourable flow-path-wallthickness relation; permits processing at reduced temperature and also shorter cycle times. FDA = Food and Drug Administration (USA) FMVSS = Federal Motor Vehicle Safety Standard (USA) UL = Underwriters Laboratories (USA)

Product information

Part Marking Code	POM	ISO 11469
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Rheological properties

Melt volume-flow rate	39 cm ³ /10min	ISO 1133
Temperature	190 °C	
Load	2.16 kg	
Moulding shrinkage range, parallel	1.9 %	ISO 294-4, 2577
Moulding shrinkage range, normal	1.8 %	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	3000 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	15 %	ISO 527-1/-2
Flexural Modulus	2850 MPa	ISO 178
Flexural Stress at 3.5%	77 MPa	ISO 178
Tensile creep modulus, 1h	2500 MPa	ISO 899-1
Tensile creep modulus, 1000h	1300 MPa	ISO 899-1
Charpy impact strength, 23°C	150 kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	150 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	148 MPa	ISO 2039-1

Thermal properties

Melting temperature, 10°C/min	166 °C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	106 °C	ISO 75-1/-2
Vicat softening temperature, 50°C/h, 50N	151 °C	ISO 306
Coeff. of linear therm. expansion, parallel	110 E-6/K	ISO 11359-1/-2
Thermal conductivity of melt	0.155 W/(m K)	Internal

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Spec. heat capacity of melt	2060 J/(kg K)	Internal
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Flammability

Burning Behav. at 1.5mm nom. thickn.	HB class	UL 94
Thickness tested	1.5 mm	UL 94
Burning Behav. at thickness h	HB class	UL 94
Thickness tested	0.81 mm	UL 94
UL recognition	yes	UL 94

Electrical properties

Relative permittivity, 100Hz	4	IEC 62631-2-1
Relative permittivity, 1MHz	4	IEC 62631-2-1
Dissipation factor, 100Hz	30 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	PLC 0 PLC	UL 746A

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
Density of melt	1200 kg/m³	Internal

Injection

Drying Temperature	100 - 120 °C	
Drying Time, Dehumidified Dryer	3 - 4 h	
Processing Moisture Content	0.15 %	
Melt Temperature Optimum	210 °C	Internal
Screw tangential speed	0.2 - 0.21 m/s	
Max. mould temperature	80 - 120 °C	
Back pressure	4 MPa	
Injection speed	slow-medium	
Ejection temperature	140 °C	Internal

Characteristics

Additives	Release agent
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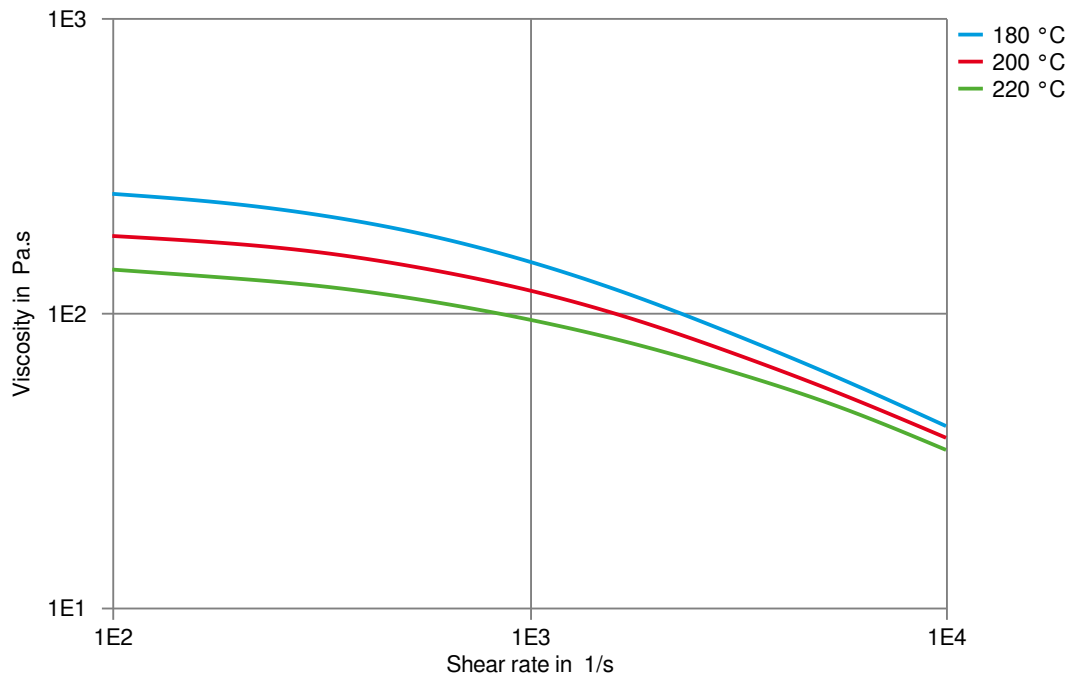
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Additional information

Injection molding

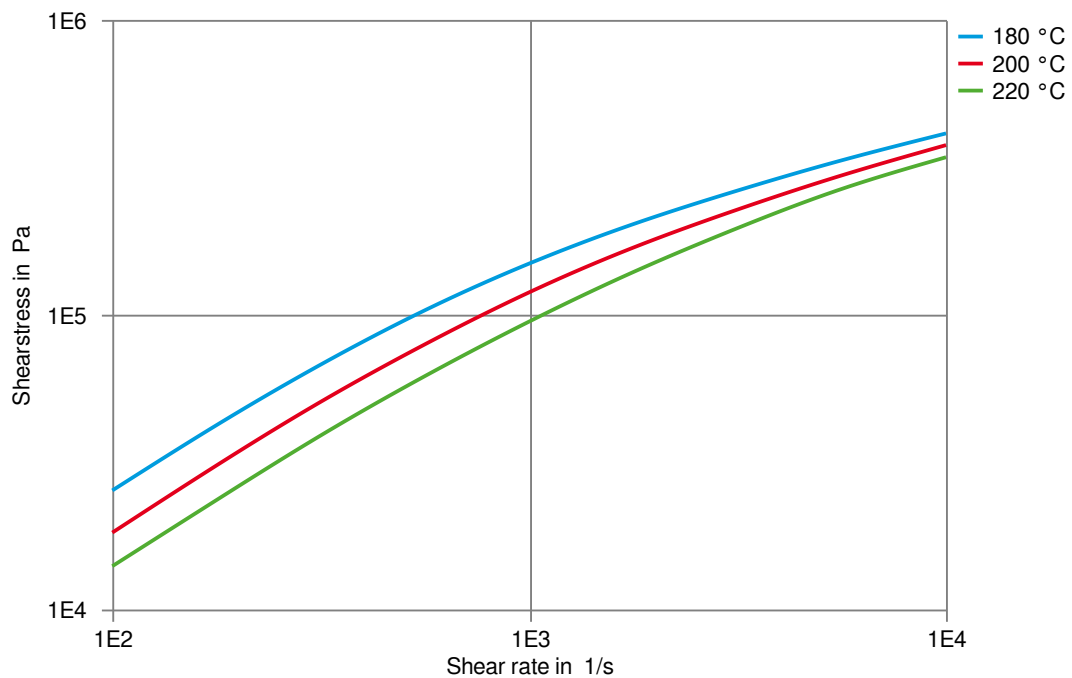
Standard injection moulding machines with three phase (15 to 25 D) plasticating screws will fit.

Viscosity-shear rate



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Shearstress-shear rate

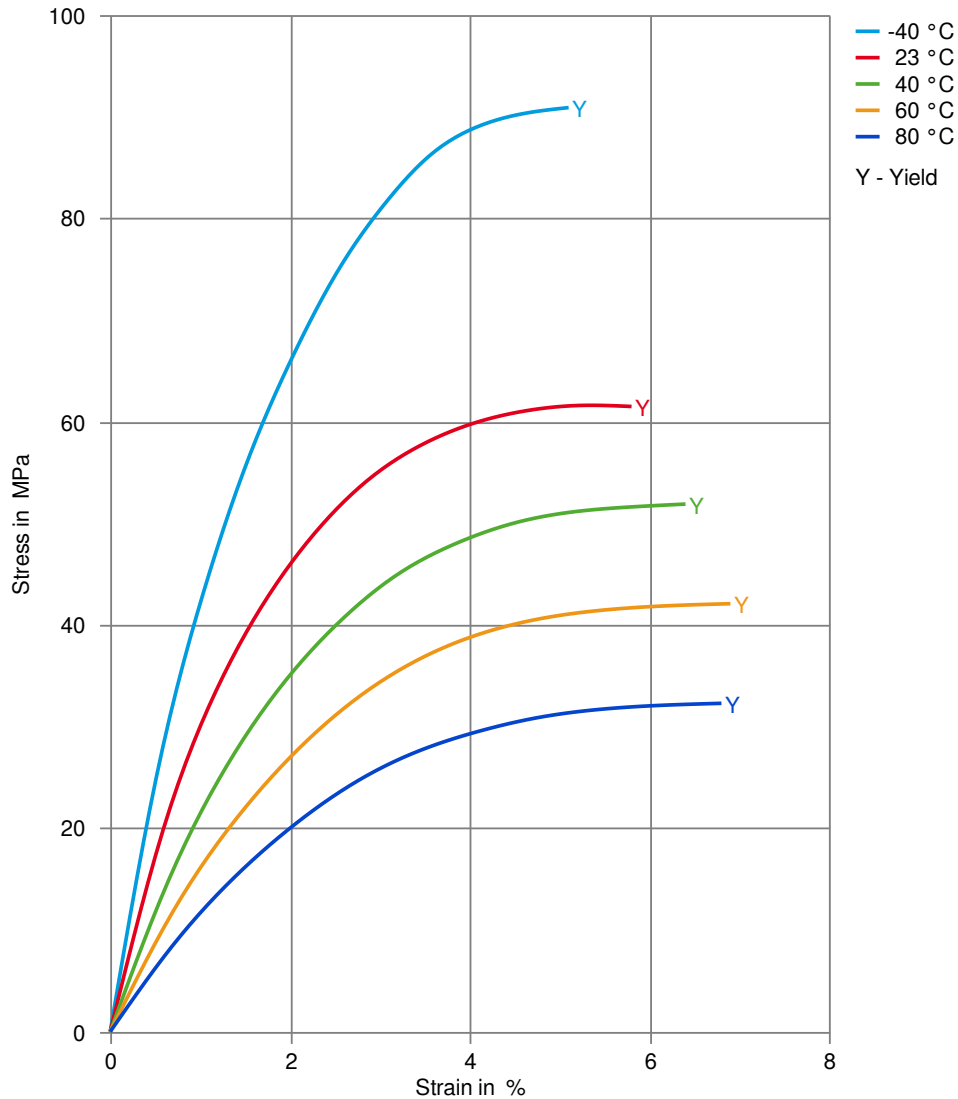


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Stress-strain

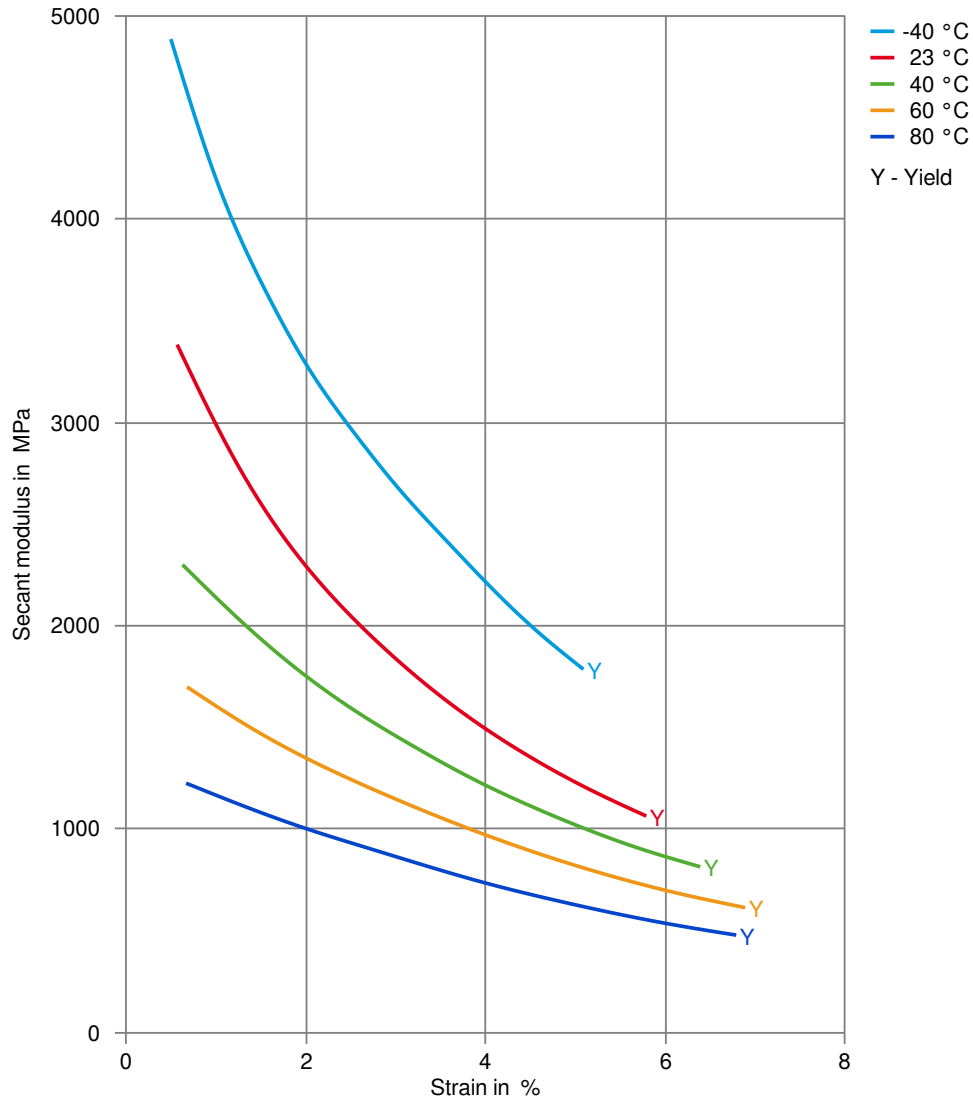


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Secant modulus-strain



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Processing Texts

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.
Longer pre-drying times/storage	The product can then be stored in standard conditions until processed.
Injection molding	Standard injection moulding machines with three phase (15 to 25 D) plasticating screws will fit.
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 %
Injection molding Postprocessing	Conditioning e.g. moisturizing is not necessary.

Other Approvals

Other Approvals	OEM	Specification	Additional Information
	BMW	GS 93016	
	Continental	TST N 055 54.14	
	Ford	WSK-M4D635-A4	Natural & Black 12
	Li Auto	Q/LiA5310020	2021 (V2)

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