Celanese
The chemistry inside innovation™

HOSTAFORM® C 9021 FC

Chemical abbreviation according to ISO 1043-1: POM Molding compound ISO 29988- POM-K, M-GNR, 03-002 POM copolymer Standard-Injection molding type with high rigidity, hardness and toughness; good chemical resistance to solvents, fuel and strong alkalis as well as good hydrolysis resistance; high resistance to thermal and oxidative degradation. The products are in compliance with EU regulations (EC) No 1935/2004, (EC) No 2023/2006 and (EU) 10/2011, USA FDA 21 CFR Titles 174 – 199, and Chinese food contact regulations GB4806.1, GB31603 and GB9685.

Rheological properties

Melt volume-flow rate	8	cm^3/10min	ISO 1133
Temperature	190	°C	
Load	2.16	kg	
Moulding shrinkage, parallel	2.0	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.9	%	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	2850	MPa	ISO 527-1/-2
Yield stress, 50mm/min	64	MPa	ISO 527-1/-2
Yield strain, 50mm/min	9	%	ISO 527-1/-2
Nominal strain at break	30	%	ISO 527-1/-2
Flexural Modulus	2700	MPa	ISO 178
Charpy impact strength, 23°C	220[P]	kJ/m^2	ISO 179/1eU
Charpy impact strength, -30°C	220	kJ/m^2	ISO 179/1eU
Charpy notched impact strength, 23°C	6.5	kJ/m^2	ISO 179/1eA
Charpy notched impact strength, -30°C	6	kJ/m^2	ISO 179/1eA
Poisson's ratio	0.399		

[P]: Partial Break

Thermal properties

Melting temperature, 10°C/min	166	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	104	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	160	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h, 50N	150	°C	ISO 306
Coeff. of linear therm. expansion, parallel	110	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	110	E-6/K	ISO 11359-1/-2
Thermal conductivity of melt	0.155	W/(m K)	Internal
Eff. thermal diffusivity	4.85E-8	m^2/s	Internal
Spec. heat capacity of melt	2210	J/(kg K)	Internal

Electrical properties

Relative permittivity, 100Hz	4		IEC 62631-2-1
Relative permittivity, 1MHz	4		IEC 62631-2-1
Dissipation factor, 100Hz	20	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

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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	%	
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

Additional information

Injection molding

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

Melt temperature 190-210 °C
Mould temperature 80-120 °C

Film extrusion

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

Melt temperature 180-190 °C

Other extrusion

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

Melt temperature 180-190 °C

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Sheet extrusion

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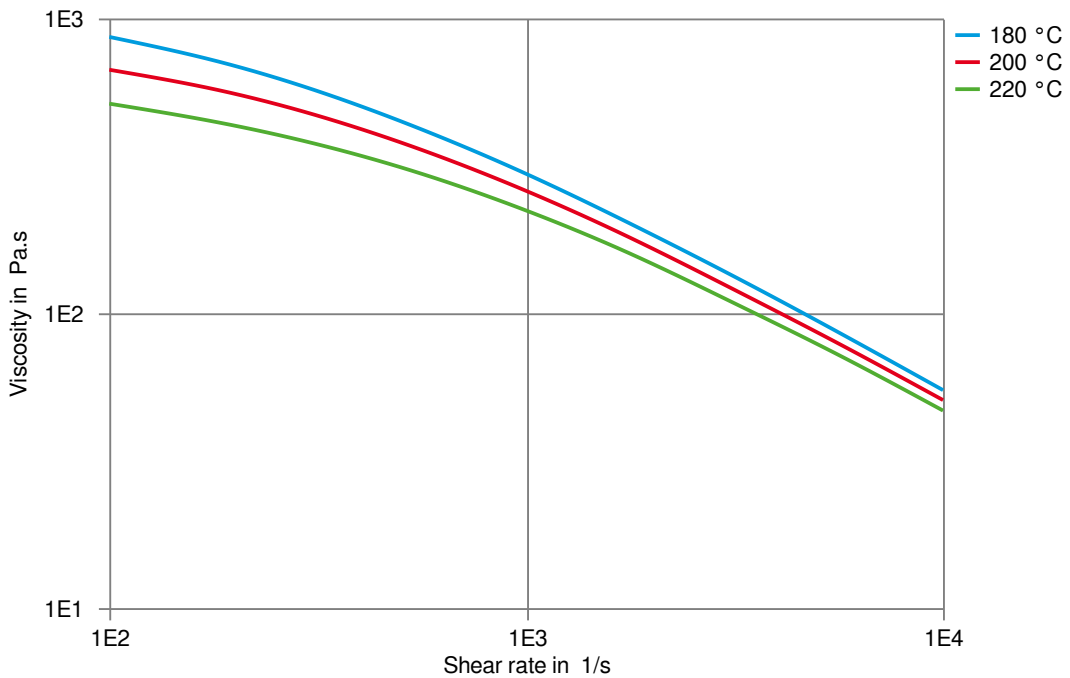
Standard extruders with grooved feed zone and short compression screws (minimum 25 D) will fit.

Melt temperature 180-190 °C

Viscosity-shear rate



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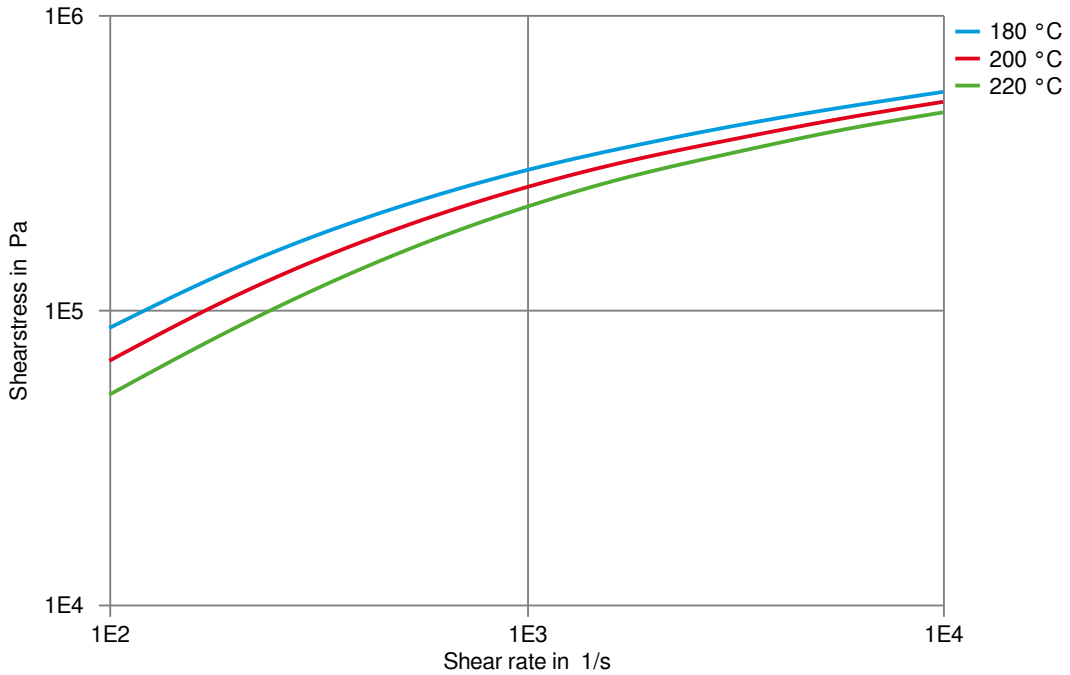
Shearstress-shear rate



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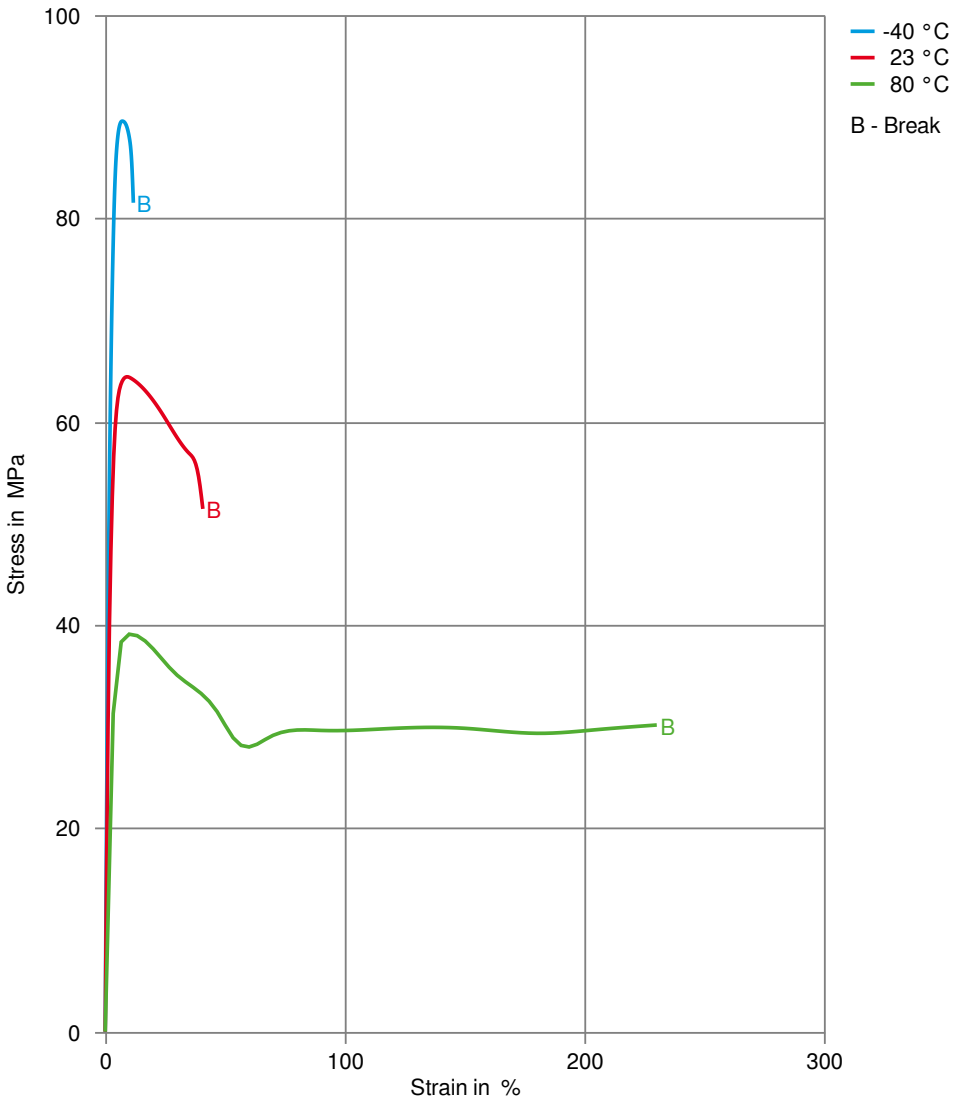
Stress-strain



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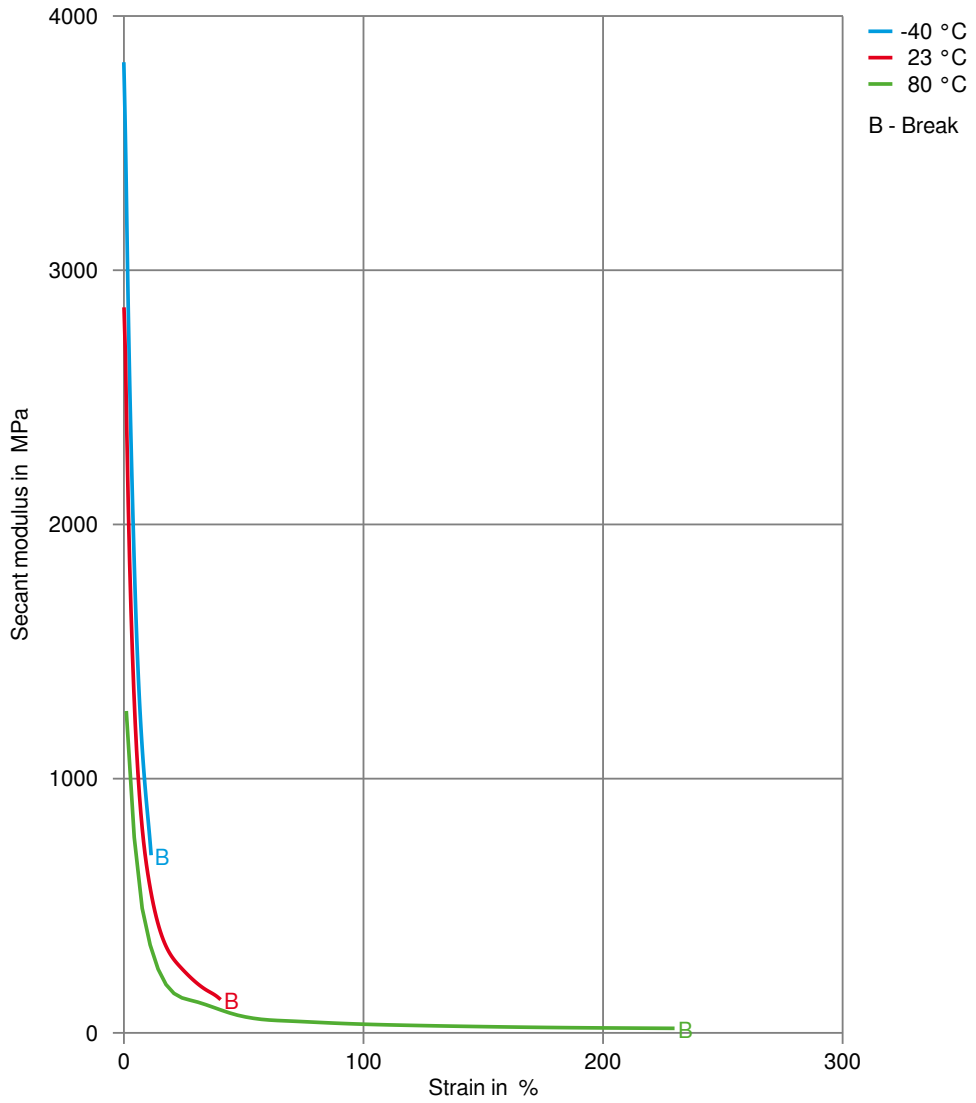
Secant modulus-strain



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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. Melt temperature 190-210 °C Mould temperature 80-120 °C
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.

Revised: 2023-02-23 Source: Celanese Materials Database