HOSTAFORM® C 9021 S1

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POM copolymer Injection molding type with high rigidity, hardness and toughness; good chemical resistance. With tribological modification for demanding applications that require prevention of audible noise caused by stick-slip phenomenon. Available in natural and colored. 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 < 100mm/min for a thickness more than 1 mm. Ranges of applications: precision engineering, electric and electronical industry, domestic appliances. 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	8.1	cm^3/10min	ISO 1133
Temperature	374	°F	
Load	4.76	lb	
Molding shrinkage, parallel	2.0	%	ISO 294-4, 2577
Molding shrinkage, normal	1.8	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	392000	psi	ISO 527-1/-2
Tensile stress at yield, 50mm/min	8700	psi	ISO 527-1/-2
Tensile strain at yield, 50mm/min	11.5	%	ISO 527-1/-2
Nominal strain at break	35	%	ISO 527-1/-2
Charpy impact strength, 23°C	85.6[P]	ftlb/in^2	ISO 179/1eU
Charpy impact strength, -30°C	76.1	ftlb/in^2	ISO 179/1eU
Charpy notched impact strength, 23°C	3.09	ftlb/in^2	ISO 179/1eA
Charpy notched impact strength, -30°C	2.85	ftlb/in^2	ISO 179/1eA

[P]: Partial Break

Thermal properties

Melting temperature, 10°C/min	331	°F	ISO 11357-1/-3
Coefficient of linear thermal expansion (CLTE), parallel	0.61	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	0.611	E-4/°F	ISO 11359-1/-2
Thermal conductivity of melt	0.155	W/(m K)	ISO 22007-2
Effective thermal diffusivity, flow	4.85E-8	m^2/s	ISO 22007-4
Specific heat capacity of melt	2210	J/(kg K)	ISO 22007-4

Physical/Other properties

Humidity absorption, 2mm	0.2	%	Sim. to ISO 62
Water absorption, 2mm	0.65	%	Sim. to ISO 62
Density	0.0509	lb/in^3	ISO 1183

HOSTAFORM® C 9021 S1

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Injection

Drying Recommended	no	
Drying Temperature	212	°F
Drying Time, Dehumidified Dryer	3 - 4	h
Processing Moisture Content	≤0.2	%
Melt Temperature Optimum	392	°F
Min. melt temperature	374	°F
Max. melt temperature	410	°F
Max. screw tangential speed	≤0.3	m/s
Mold Temperature Optimum	212	°F
Min. mold temperature	176	°F
Max. mold temperature	248	°F
Hold pressure range	8700 - 17400	psi
Hold Pressure Time (h is the max. wall thickness of the part in mm)	$2h^2$-3	s
Back pressure	580	psi
Ejection temperature	284	°F

Characteristics

Processing	Injection Molding, Film Extrusion, Extrusion, Sheet Extrusion, Other Extrusion, Blow Molding
Additives	Release agent
Special characteristics	Low wear / Low friction

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

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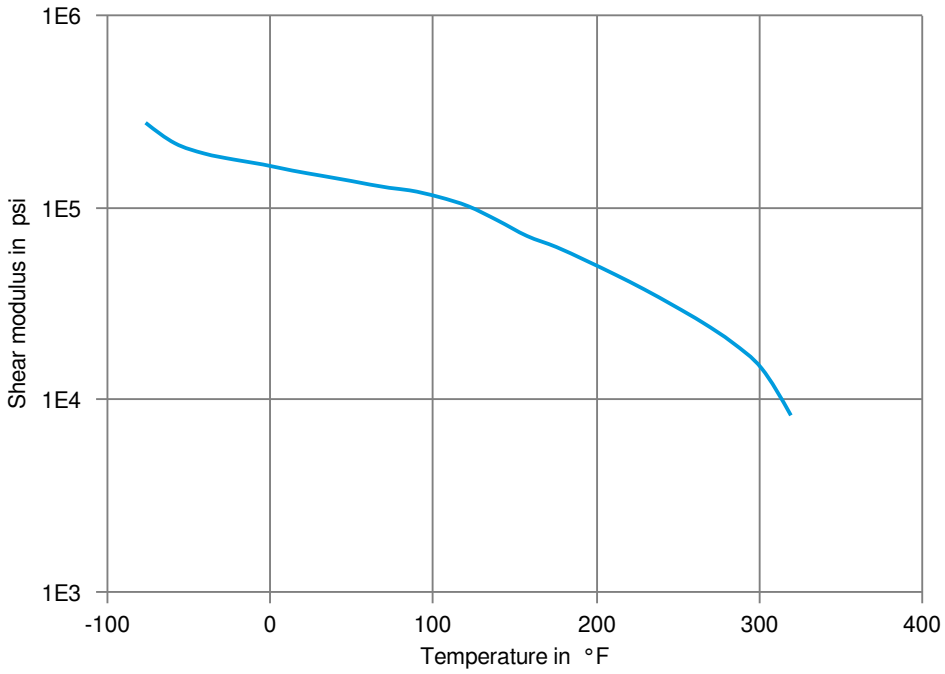
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Drying is not normally required. If material has come in contact with moisture through improper storage or handling or through regrind use, drying may be necessary to prevent splay and odor problems.

Storage

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

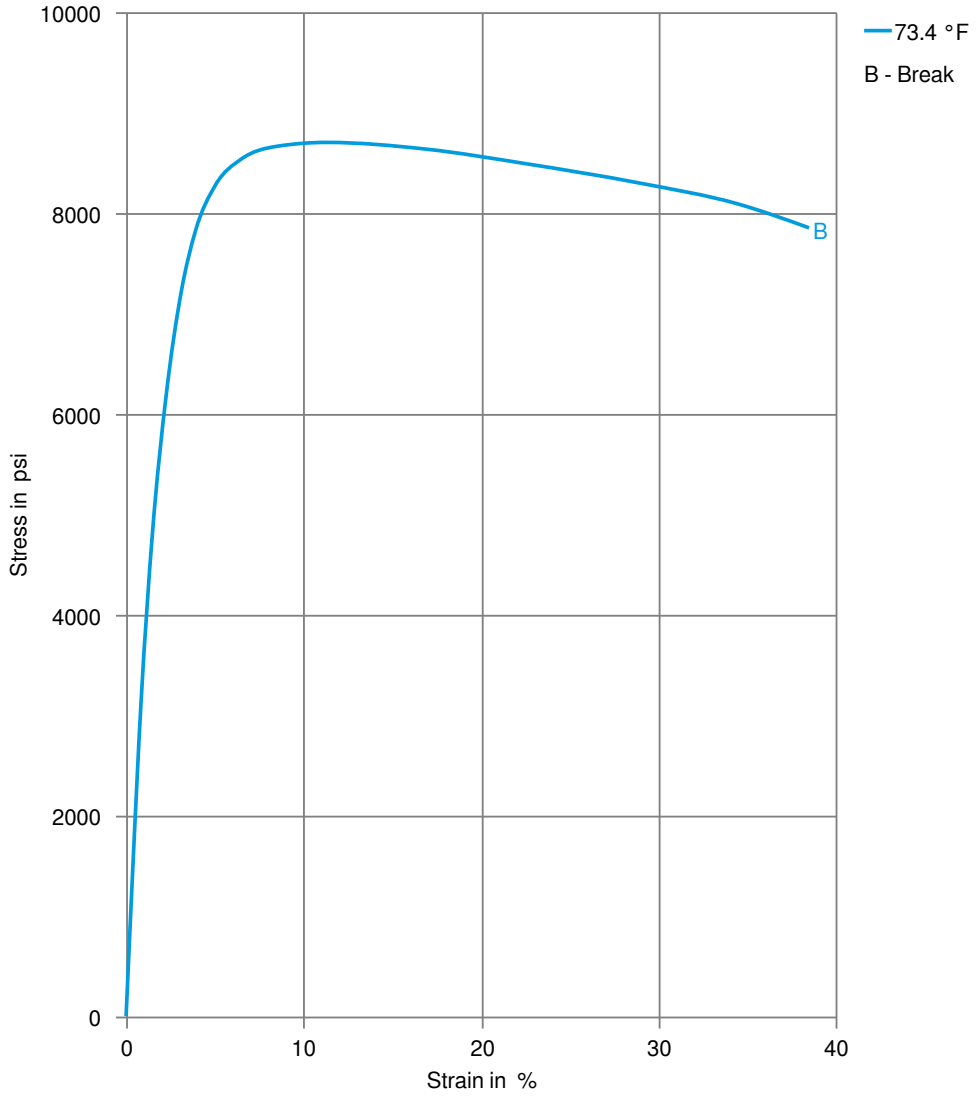
Dynamic Shear modulus-temperature



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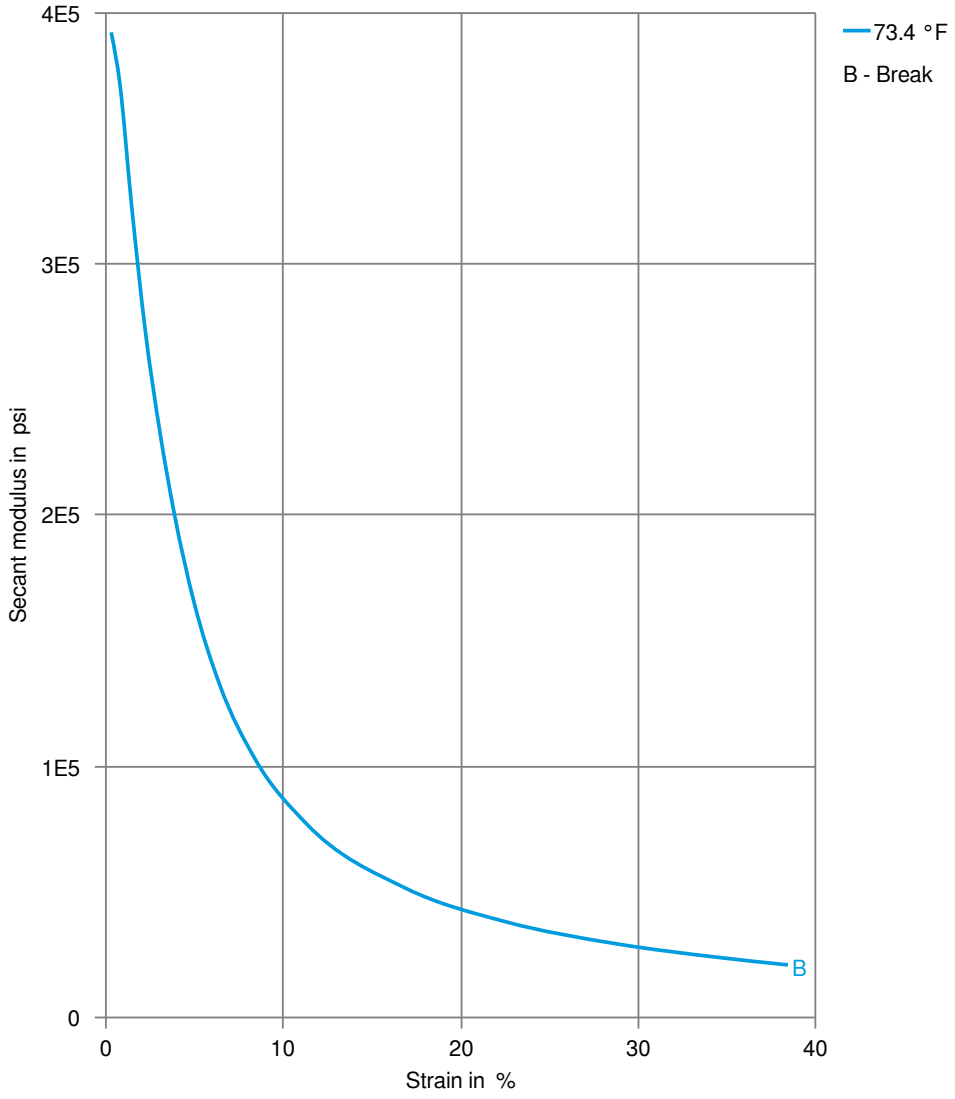
Stress-strain



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Secant modulus-strain



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