HOSTAFORM® C 9021 GV3/20

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Chemical abbreviation according to ISO 1043-1: POM-GB20 Molding compound ISO 29988- POM-K, M-GNR, 03-002, GB20 POM copolymer Injection molding type, reinforced with ca. 20 % glass spheres; high resistance to thermal and oxidative degradation. UL-registration in natural and a thickness more than 0.81 mm, in black and a thickness more than 1.5 mm as UL94 HB, temperature index UL 746 B for a thickness of 3 mm, electrical 105 °C, mechanical 95 °C (tensile impact) and 100 °C (tensile). Burning rate ISO 3795 and FMVSS 302 < 100 mm/min for a thickness more than 1 mm. Ranges of applications: For low-warpage molded parts with higher rigidity and hardness. FMVSS = Federal Motor Vehicle Safety Standard (USA) UL = Underwriters Laboratories (USA)

Product information

Resin Identification	POM-GB20	ISO 1043
Part Marking Code	>POM-GB20<	ISO 11469

Rheological properties

Melt volume-flow rate	8.5	cm^3/10min	ISO 1133
Temperature	374	°F	
Load	4.76	lb	
Molding shrinkage range, parallel	1.9	%	ISO 294-4, 2577
Molding shrinkage range, normal	1.6	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	493000	psi	ISO 527-1/-2
Tensile stress at yield, 50mm/min	6700	psi	ISO 527-1/-2
Tensile strain at yield, 50mm/min	6.5	%	ISO 527-1/-2
Nominal strain at break	15	%	ISO 527-1/-2
Flexural modulus	464000	psi	ISO 178
Compressive stress at 1% strain	3770	psi	ISO 604
Tensile creep modulus, 1h	435000	psi	ISO 899-1
Tensile creep modulus, 1000h	247000	psi	ISO 899-1
Charpy impact strength, 23°C	23.8	$ftlb/in^2$	ISO 179/1eU
Charpy impact strength, -30°C	23.8	$ftlb/in^2$	ISO 179/1eU
Charpy notched impact strength, 23°C	1.66	$ftlb/in^2$	ISO 179/1eA
Charpy notched impact strength, -30°C	1.66	$ftlb/in^2$	ISO 179/1eA
Ball indentation hardness, H 358/30	23800	psi	ISO 2039-1

Thermal properties

Melting temperature, 10°C/min	331	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	230	°F	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	0.56	E-4/°F	ISO 11359-1/-2

Flammability

Burning Behav. at 1.5mm nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	0.0591	in	IEC 60695-11-10
Burning Behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	0.0319	in	IEC 60695-11-10
UL recognition	yes		UL 94

HOSTAFORM® C 9021 GV3/20

HOSTAFORM®

Electrical properties

Relative permittivity, 100Hz	4.5		IEC 62631-2-1
Relative permittivity, 1MHz	4.2		IEC 62631-2-1
Dissipation factor, 100Hz	200	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	70	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	889	kV/in	IEC 60243-1
Comparative tracking index	600		IEC 60112

Physical/Other properties

Humidity absorption, 2mm	0.15	%	Sim. to ISO 62
Water absorption, 2mm	0.8	%	Sim. to ISO 62
Density	0.0552	lb/in^3	ISO 1183

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	290	psi

Automotive

OEM	STANDARD	ADDITIONAL INFORMATION
Bosch	N28 BN22-X014	Natural
Bosch	N28 BN22-X014	Black
Continental	TST N 055 54.15	

Characteristics

Processing	Injection Molding
Additives	Release agent
Special characteristics	Low Warpage

HOSTAFORM® C 9021 GV3/20

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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.

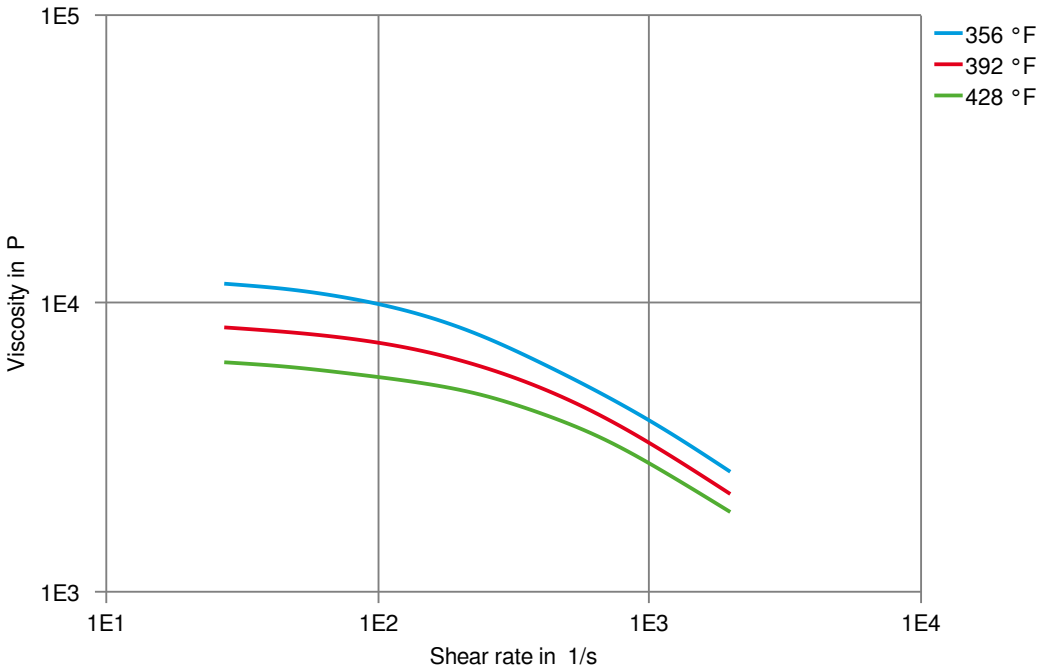
Storage

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

HOSTAFORM® C 9021 GV3/20

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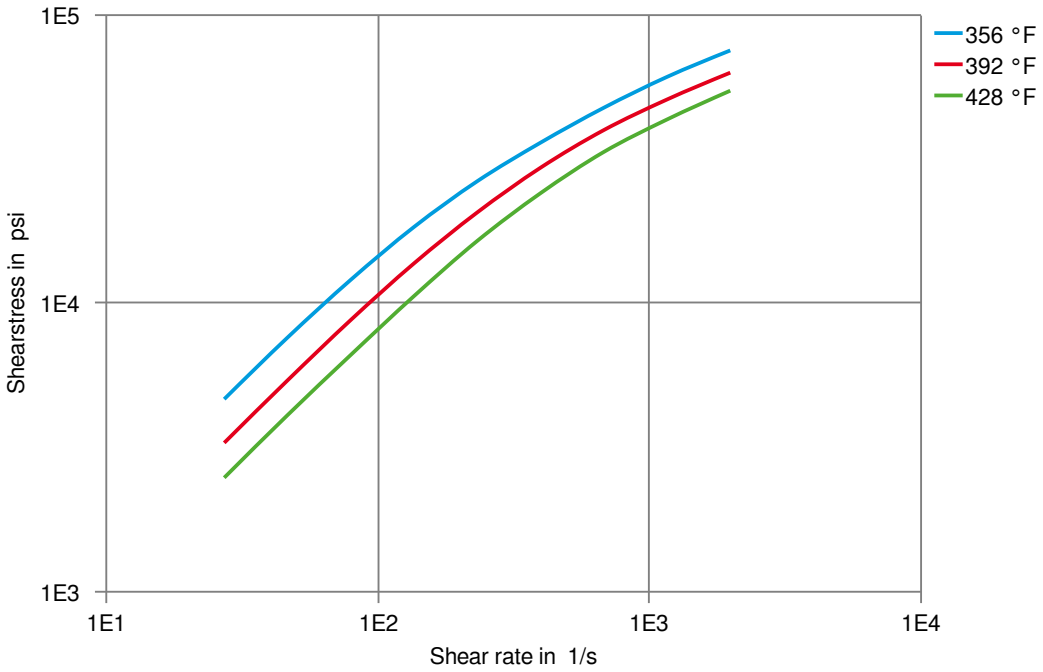
Viscosity-shear rate



HOSTAFORM® C 9021 GV3/20

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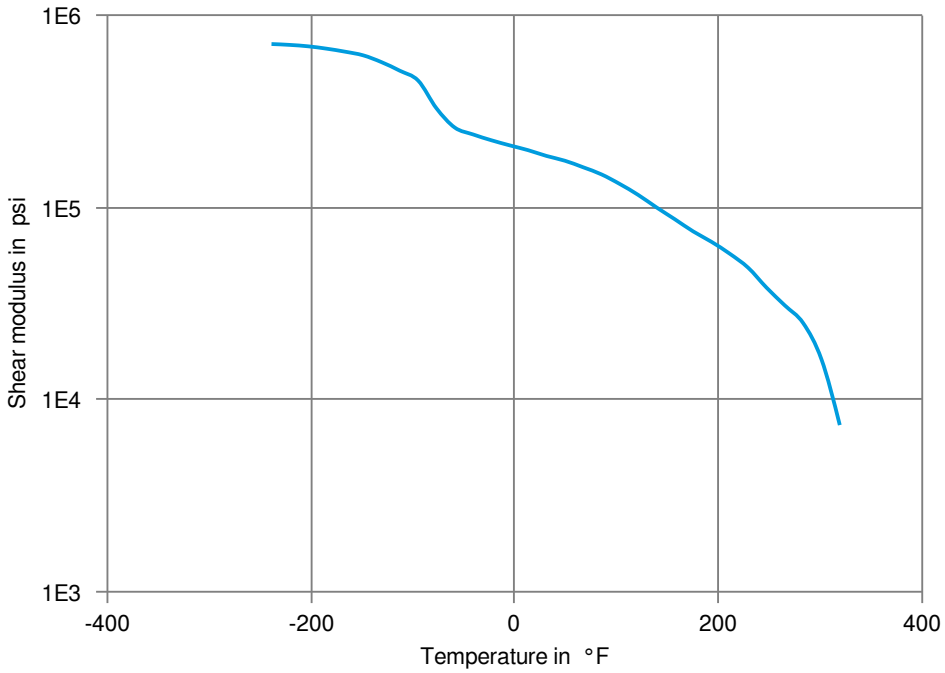
Shearstress-shear rate



HOSTAFORM® C 9021 GV3/20

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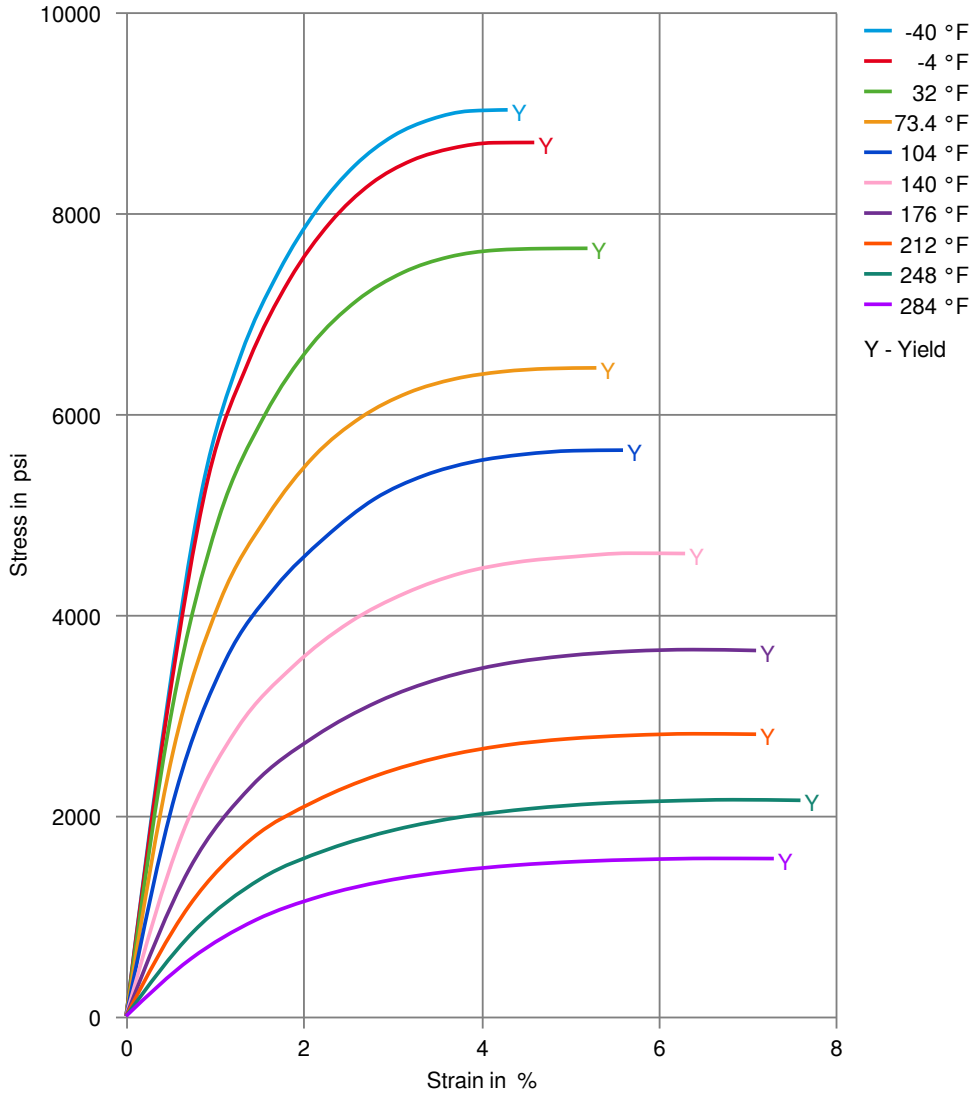
Dynamic Shear modulus-temperature



HOSTAFORM® C 9021 GV3/20

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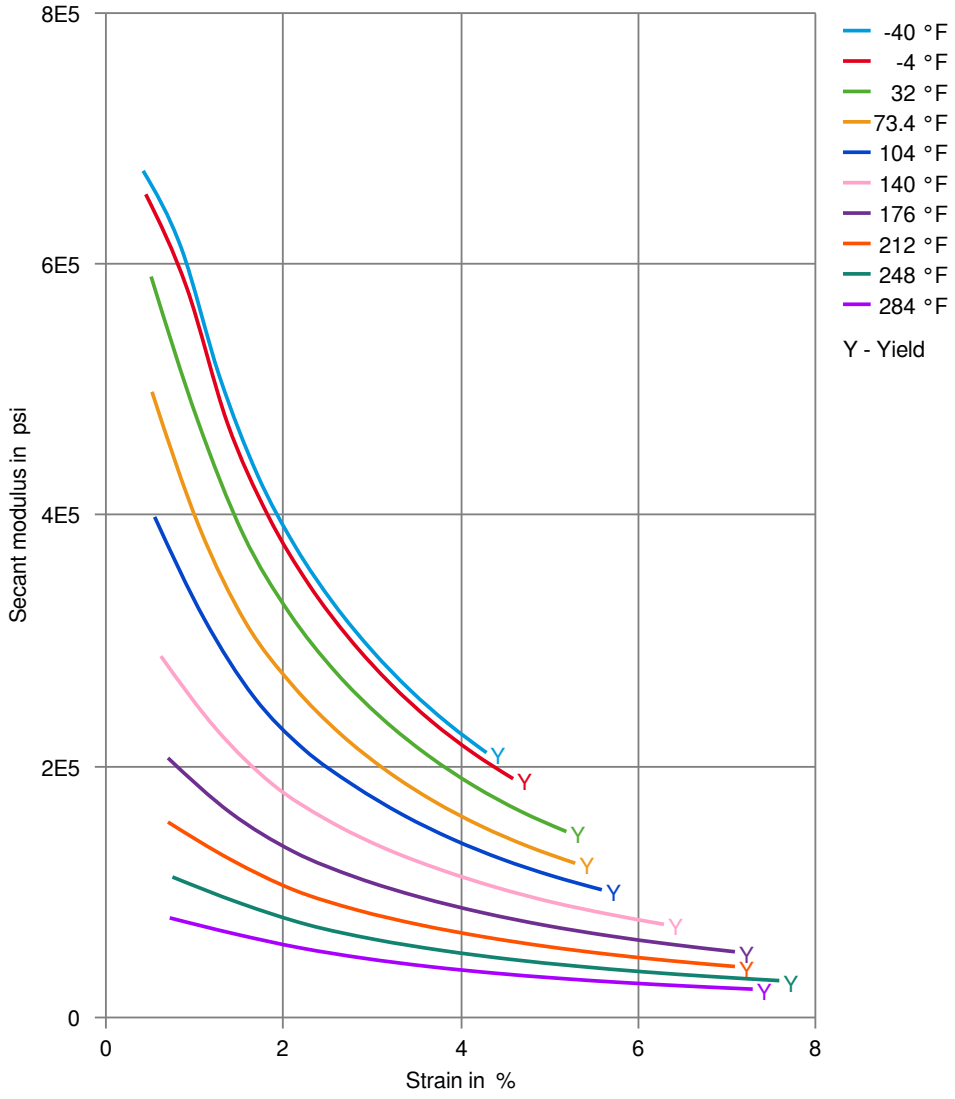
Stress-strain



HOSTAFORM® C 9021 GV3/20

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Secant modulus-strain



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