HOSTAFORM® C 9021 GV1/20

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Chemical abbreviation according to ISO 1043-1: POM-GF20 Molding compound ISO 29988- POM-K, M-GNR, 02-003, GF20 POM copolymer Injection molding type, reinforced with ca. 20 % glass fibers; high resistance to thermal and oxidative degradation; reduced thermal expansion and shrinkage. UL-registration in natural and black and a thickness more than 1.5 mm as UL 94 HB, temperature index UL 746 B, electrical 105 °C, mechanical 105 °C Burning rate ISO 3795 and FMVSS 302 < 100 mm/min for a thickness more than 1 mm thickness. Ranges of applications: For molded parts with high strength and rigidity as well as higher hardness. FMVSS = Federal Motor Vehicle Safety Standard (USA) UL = Underwriters Laboratories (USA)

Product information

Resin Identification	POM-GF20	ISO 1043
Part Marking Code	>POM-GF20<	ISO 11469

Rheological properties

Melt volume-flow rate	4.5	cm^3/10min	ISO 1133
Temperature	374	°F	
Load	4.76	lb	
Molding shrinkage, parallel	0.7	%	ISO 294-4, 2577
Molding shrinkage, normal	1.1	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	1.04E6	psi	ISO 527-1/-2
Tensile stress at break, 5mm/min	17400	psi	ISO 527-1/-2
Tensile strain at break, 5mm/min	3	%	ISO 527-1/-2
Flexural modulus	1000000	psi	ISO 178
Flexural strength	24700	psi	ISO 178
Flexural strain at failure	3.4	%	ISO 178
Tensile creep modulus, 1h	943000	psi	ISO 899-1
Tensile creep modulus, 1000h	580000	psi	ISO 899-1
Charpy impact strength, 23°C	16.6	$ftlb/in^2$	ISO 179/1eU
Charpy impact strength, -30°C	19	$ftlb/in^2$	ISO 179/1eU
Charpy notched impact strength, 23°C	3.81	$ftlb/in^2$	ISO 179/1eA
Charpy notched impact strength, -30°C	3.81	$ftlb/in^2$	ISO 179/1eA
Ball indentation hardness, H 358/30	27600	psi	ISO 2039-1
Poisson's ratio	0.434		

Thermal properties

Melting temperature, 10°C/min	331	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	318	°F	ISO 75-1/-2
Temperature of deflection under load, 8 MPa	221	°F	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	0.28	E-4/°F	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	0.444	E-4/°F	ISO 11359-1/-2

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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	0.1181	in	IEC 60695-11-10
UL recognition	yes		UL 94

Electrical properties

Relative permittivity, 100Hz	4.3		IEC 62631-2-1
Relative permittivity, 1MHz	4.3		IEC 62631-2-1
Dissipation factor, 100Hz	30	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	889	kV/in	IEC 60243-1
Comparative tracking index	600		IEC 60112

Physical/Other properties

Humidity absorption, 2mm	0.19	%	Sim. to ISO 62
Water absorption, 2mm	0.85	%	Sim. to ISO 62
Density	0.056	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-X022	Natural
Ford	WSB-M4D883-A1	
General Motors	GMW17968P-POM-GF20	Natural
Renault	No spec listed	

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Characteristics

Processing	Injection Molding
Additives	Release agent

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.

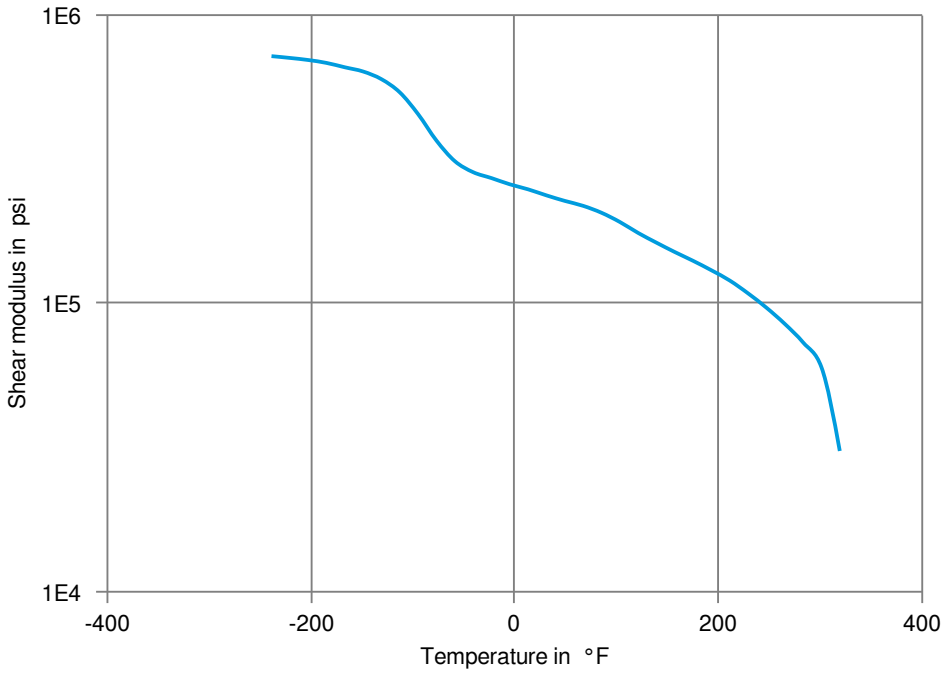
Storage

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

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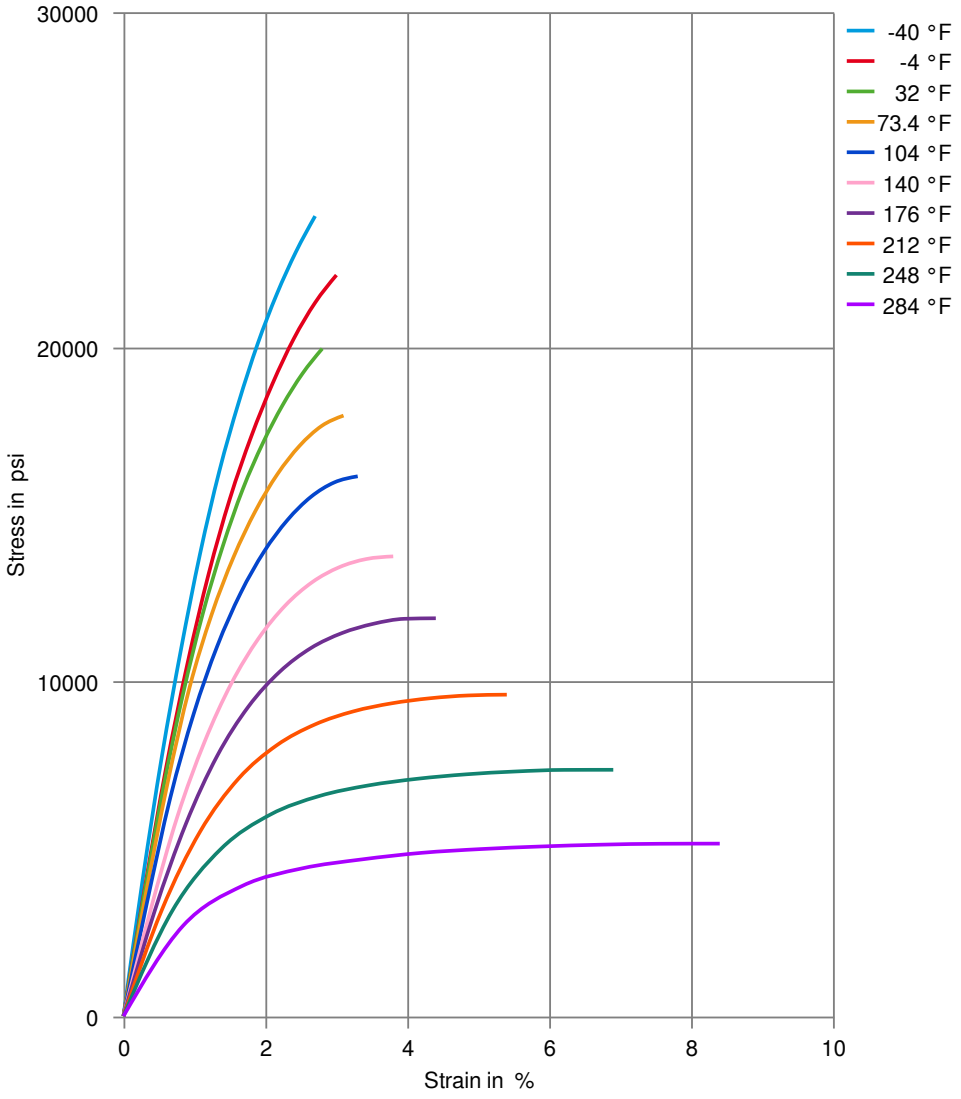
Dynamic Shear modulus-temperature



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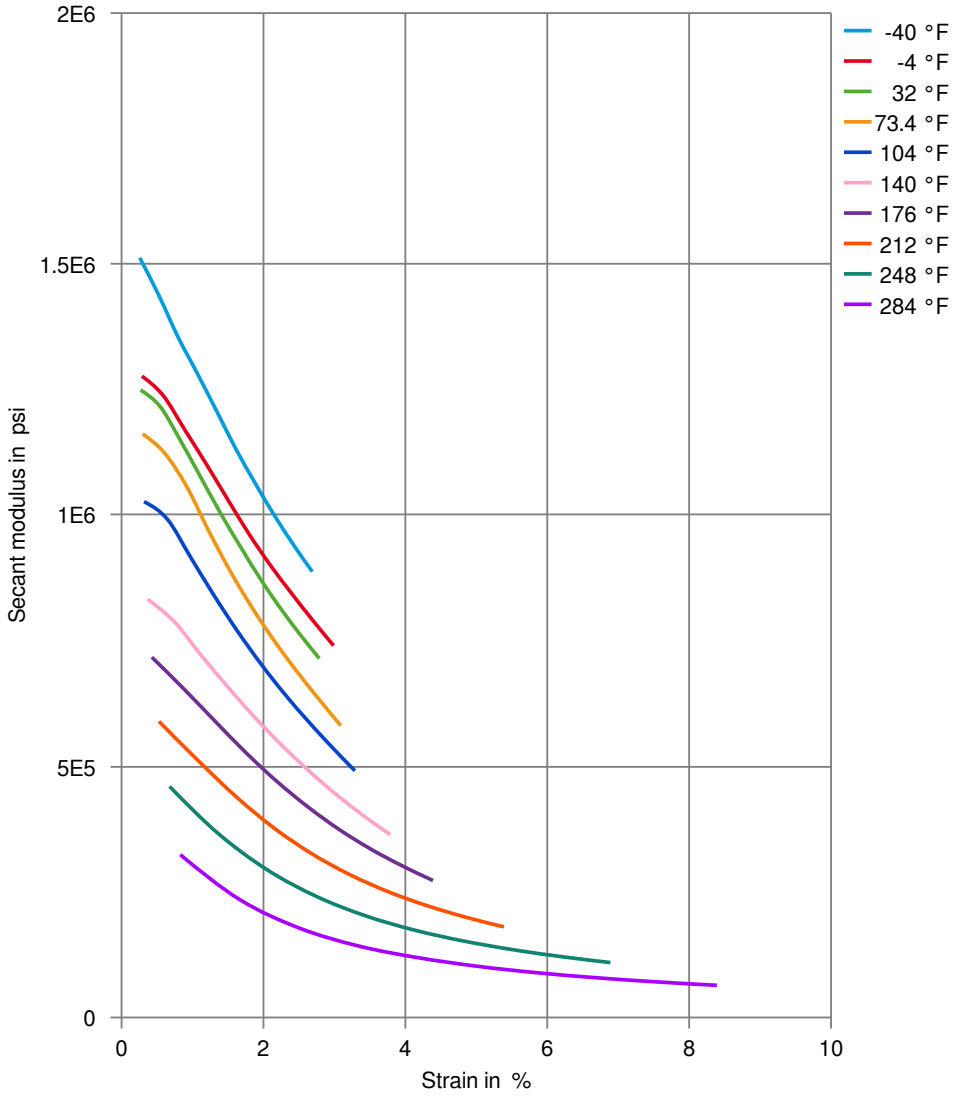
Stress-strain



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Secant modulus-strain



Revised: 2025-07-10 Source: Celanese Materials Database

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