

Injection molding grade; reinforced with ca. 20 % glass fibers

Chemical abbreviation according to ISO 1043-1: POM 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

Part Marking Code	POM		ISO 11469
Rheological properties			
Melt volume-flow rate	4.5	cm ³ /10min	ISO 1133
Temperature	190	°C	
Load	2.16	kg	
Moulding shrinkage, parallel	0.7	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.1	%	ISO 294-4, 2577
Typical mechanical properties			
Tensile Modulus	7200	MPa	ISO 527-1/-2
Stress at break, 5mm/min	120	MPa	ISO 527-1/-2
Strain at break, 5mm/min	3	%	ISO 527-1/-2
Flexural Modulus	6900	MPa	ISO 178
Flexural Strength	170	MPa	ISO 178
Tensile creep modulus, 1h	6500	MPa	ISO 899-1
Tensile creep modulus, 1000h	4000	MPa	ISO 899-1
Charpy impact strength, 23°C		kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	40	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	8	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C		kJ/m²	ISO 179/1eA
Ball indentation hardness, H 358/30		MPa	ISO 2039-1
Poisson's ratio	0.434		
Thermal properties			
Melting temperature, 10°C/min	166	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	159	°C	ISO 75-1/-2
Temp. of deflection under load, 8 MPa	105	°C	ISO 75-1/-2
Coeff. of linear therm. expansion, parallel	50	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	80	E-6/K	ISO 11359-1/-2



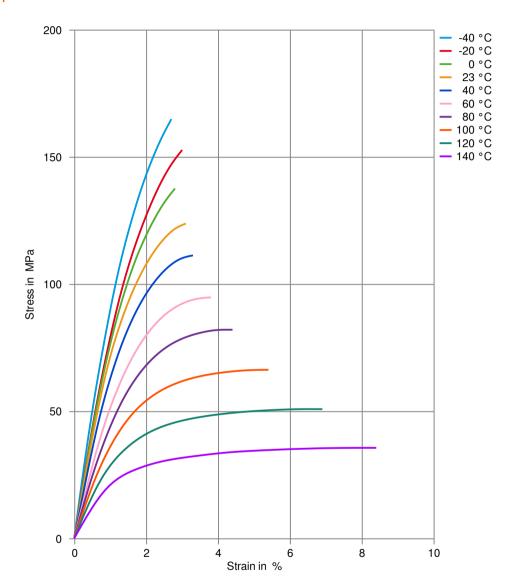
Flammability					
Burning Behav. at 1.5mm nom. thickr	ı. HB	class	UL 94		
Thickness tested		mm	UL 94		
Burning Behav. at thickness h		class	UL 94		
Thickness tested		mm	UL 94		
UL recognition	yes		UL 94		
Electrical properties					
Relative permittivity, 100Hz	4.3		IEC 62631-2-1		
Relative permittivity, 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		Ohm	IEC 62631-3-2		
Electric strength		kV/mm	IEC 60243-1		
Comparative tracking index	PLC 0	PLC	UL 746A		
Other properties					
Humidity absorption, 2mm	0.19	%	Sim. to ISO 62		
Water absorption, 2mm	0.85		Sim. to ISO 62		
Density	1550	kg/m ³	ISO 1183		
Injection					
Drying Temperature	100 - 120	°C			
Drying Time, Dehumidified Dryer	3 - 4				
Processing Moisture Content	0.15				
Screw tangential speed	0.2 - 0.21				
Max. mould temperature	80 - 120	°C			
Back pressure	2	MPa			
Injection speed	slow				
Characteristics					
Additives	Release agent				
Additional information					
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Injection molding	Standard injection moulding machines with three phase (15 to 25 D)				

Injection molding

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



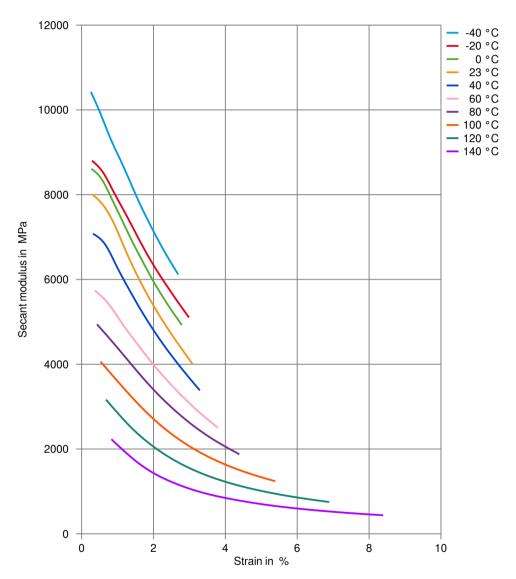
Stress-strain





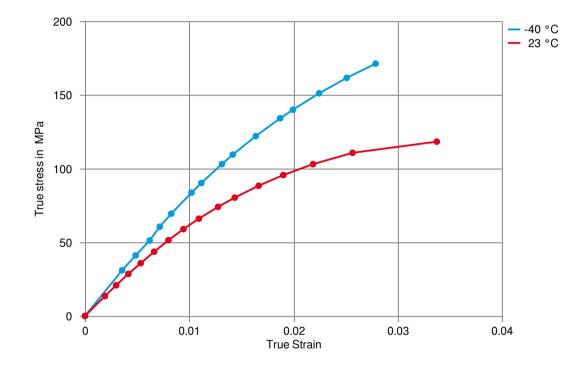
HOSTAFORM® C 9021 GV1/20

Secant modulus-strain





True stress-strain





Ford

GM

Renault

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		
	Bosch	N28 BN22-X022	Natural		

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Page: 6 of 6

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WSB-M4D883-A1

GF20

GMW17968P-POM-

Natural

No spec listed

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