Celanese
The chemistry inside innovation™

HOSTAFORM® C 9021 GV3/20

Injection molding grade; reinforced with ca. 20 % glass spheres
Chemical abbreviation according to ISO 1043-1: POM 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

Part Marking Code	POM		ISO 11469

Rheological properties

Melt volume-flow rate	8.5	cm^3/10min	ISO 1133
Temperature	190	°C	
Load	2.16	kg	
Moulding shrinkage, parallel	1.9	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.6	%	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	3400	MPa	ISO 527-1/-2
Yield stress, 50mm/min	46	MPa	ISO 527-1/-2
Yield strain, 50mm/min	6.5	%	ISO 527-1/-2
Nominal strain at break	15	%	ISO 527-1/-2
Flexural Modulus	3200	MPa	ISO 178
Compressive stress at 1% strain	26	MPa	ISO 604
Tensile creep modulus, 1h	3000	MPa	ISO 899-1
Tensile creep modulus, 1000h	1700	MPa	ISO 899-1
Charpy impact strength, 23°C	50	kJ/m^2	ISO 179/1eU
Charpy impact strength, -30°C	50	kJ/m^2	ISO 179/1eU
Charpy notched impact strength, 23°C	3.5	kJ/m^2	ISO 179/1eA
Charpy notched impact strength, -30°C	3.5	kJ/m^2	ISO 179/1eA
Ball indentation hardness, H 358/30	164	MPa	ISO 2039-1

Thermal properties

Melting temperature, 10°C/min	166	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	110	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h, 50N	151	°C	ISO 306
Coeff. of linear therm. expansion, parallel	100	E-6/K	ISO 11359-1/-2

HOSTAFORM® C 9021 GV3/20

Flammability

Burning Behav. at 1.5mm nom. thickn.	HB	class	UL 94
Thickness tested	1.5	mm	UL 94
Burning Behav. at thickness h	HB	class	UL 94
Thickness tested	0.81	mm	UL 94
UL recognition	yes		UL 94

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	35	kV/mm	IEC 60243-1
Comparative tracking index	PLC 0	PLC	UL 746A

Other properties

Humidity absorption, 2mm	0.15	%	Sim. to ISO 62
Water absorption, 2mm	0.8	%	Sim. to ISO 62
Density	1530	kg/m³	ISO 1183

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	2	MPa
Injection speed	slow	

Characteristics

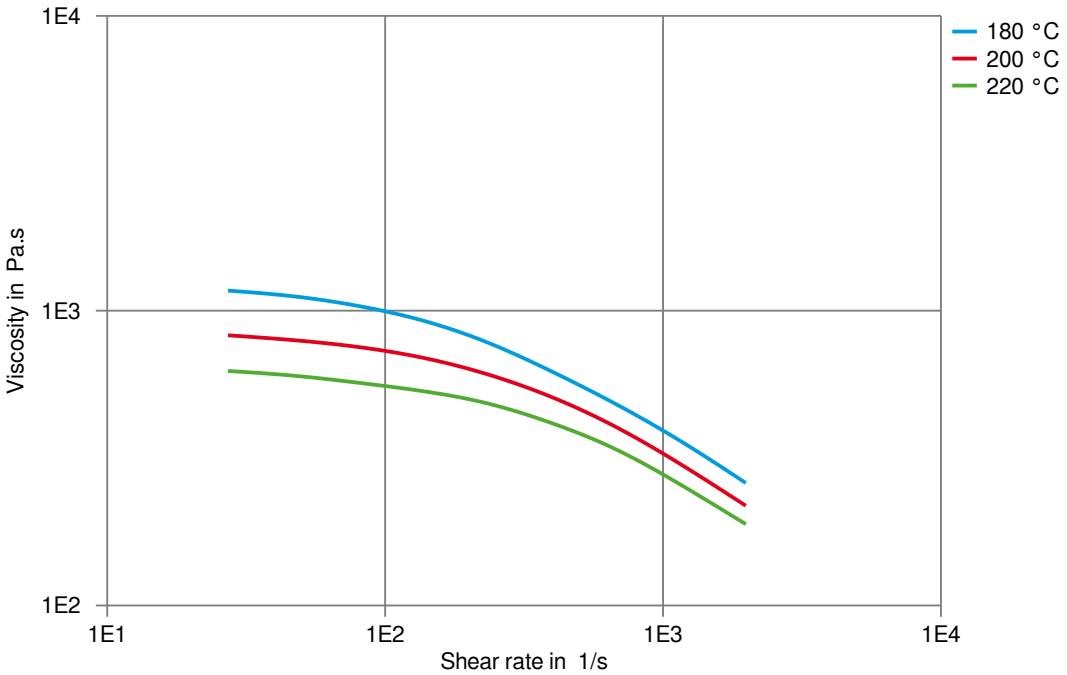
Additives	Release agent

Additional information

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

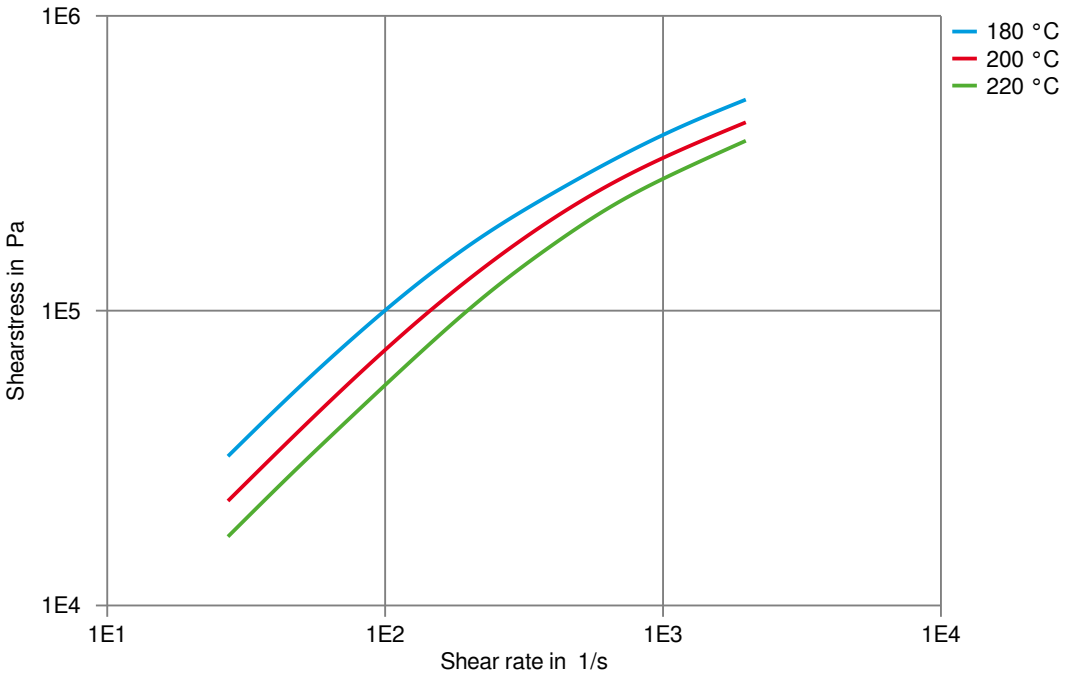
HOSTAFORM® C 9021 GV3/20

Viscosity-shear rate



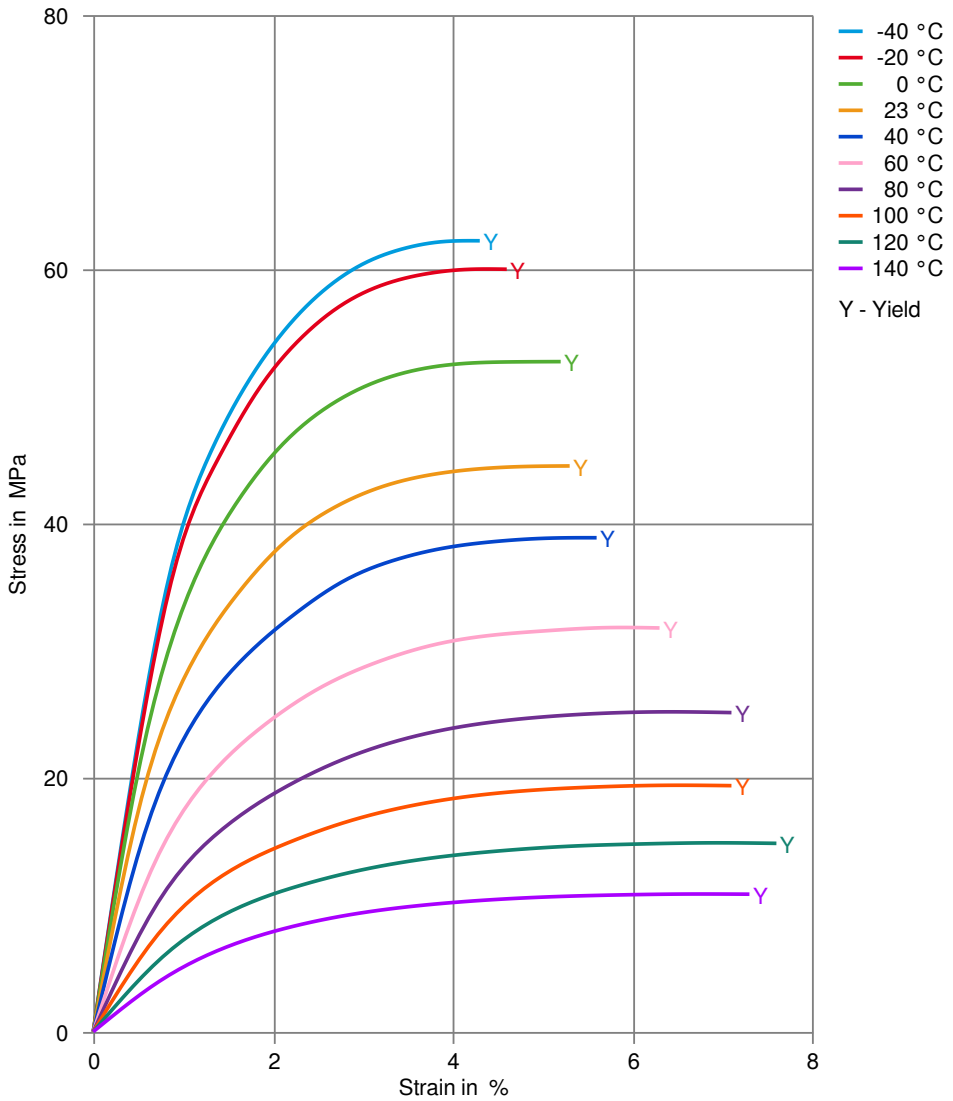
HOSTAFORM® C 9021 GV3/20

Shearstress-shear rate



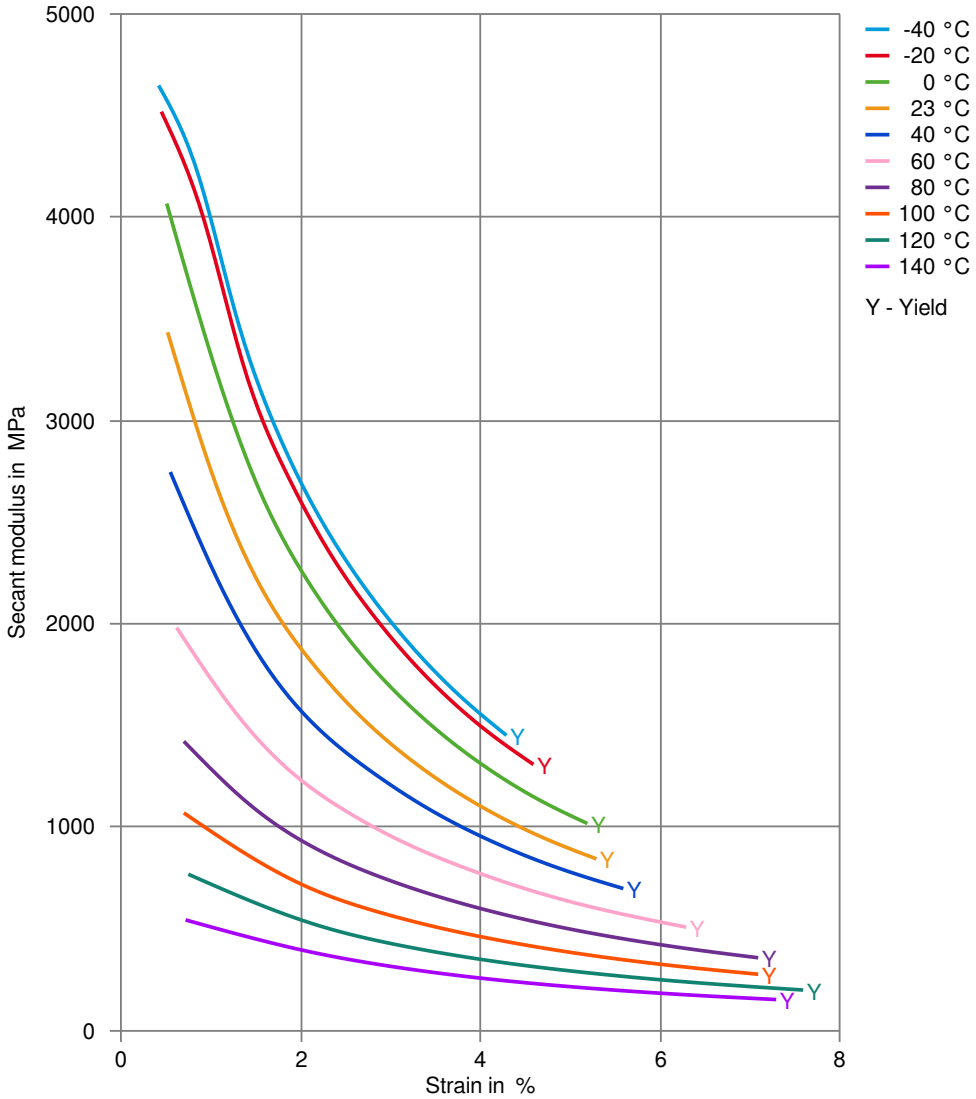
HOSTAFORM® C 9021 GV3/20

Stress-strain



HOSTAFORM® C 9021 GV3/20

Secant modulus-strain



HOSTAFORM® C 9021 GV3/20

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-X014	Natural & Black
Continental	TST N 055 54.15	
Toyota	TSM5606G-2	