Celanese
The chemistry inside innovation™

HOSTAFORM® C 9021 GV1/20 XGM

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Chemical abbreviation according to ISO 1043-1: POM Molding compound ISO 29988- POM-K, M-GS2, 02-003, GF20 POM copolymer Injection molding type, reinforced with ca 20 % glass fibers; includes PTFE for improved wear performance; high resistance to thermal and oxidative degradation; reduced thermal expansion and shrinkage. Ranges of applications: For molded parts requiring improved low wear performance while exhibiting very high strength and rigidity as well as higher hardness. FMVSS = Federal Motor Vehicle Safety Standard (USA)

Product information

Resin Identification	(POM+PTFE)-GF20	ISO 1043
Part Marking Code	>(POM+PTFE)-GF20<	ISO 11469

Rheological properties

Melt volume-flow rate	4	$cm^3/10min$	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	7700	MPa	ISO 527-1/-2
Tensile stress at break, 5mm/min	100	MPa	ISO 527-1/-2
Tensile strain at break, 5mm/min	2.5	%	ISO 527-1/-2
Flexural modulus	7400	MPa	ISO 178
Charpy notched impact strength, 23°C	5.5	kJ/m^2	ISO 179/1eA
Charpy notched impact strength, -30°C	5.5	kJ/m^2	ISO 179/1eA
Hardness, Rockwell, M-scale	86		ISO 2039-2
Poisson's ratio	0.34[C]		

[C]: Calculated

Thermal properties

Melting temperature, 10°C/min	166	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	158	°C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	30	E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	90	E-6/K	ISO 11359-1/-2

Physical/Other properties

Density	1570	kg/m^3	ISO 1183

Injection

Drying Recommended	no	
Drying Temperature	100	°C
Drying Time, Dehumidified Dryer	3 - 4	h
Processing Moisture Content	≤0.2	%
Melt Temperature Optimum	200	°C
Min. melt temperature	190	°C
Max. melt temperature	210	°C
Screw tangential speed	≤0.3	m/s

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Mold Temperature Optimum	100	°C
Min. mould temperature	80	°C
Max. mould temperature	120	°C
Hold pressure range	60 - 120	MPa
Back pressure	2	MPa

Characteristics

Processing	Injection Moulding
Delivery form	Pellets
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

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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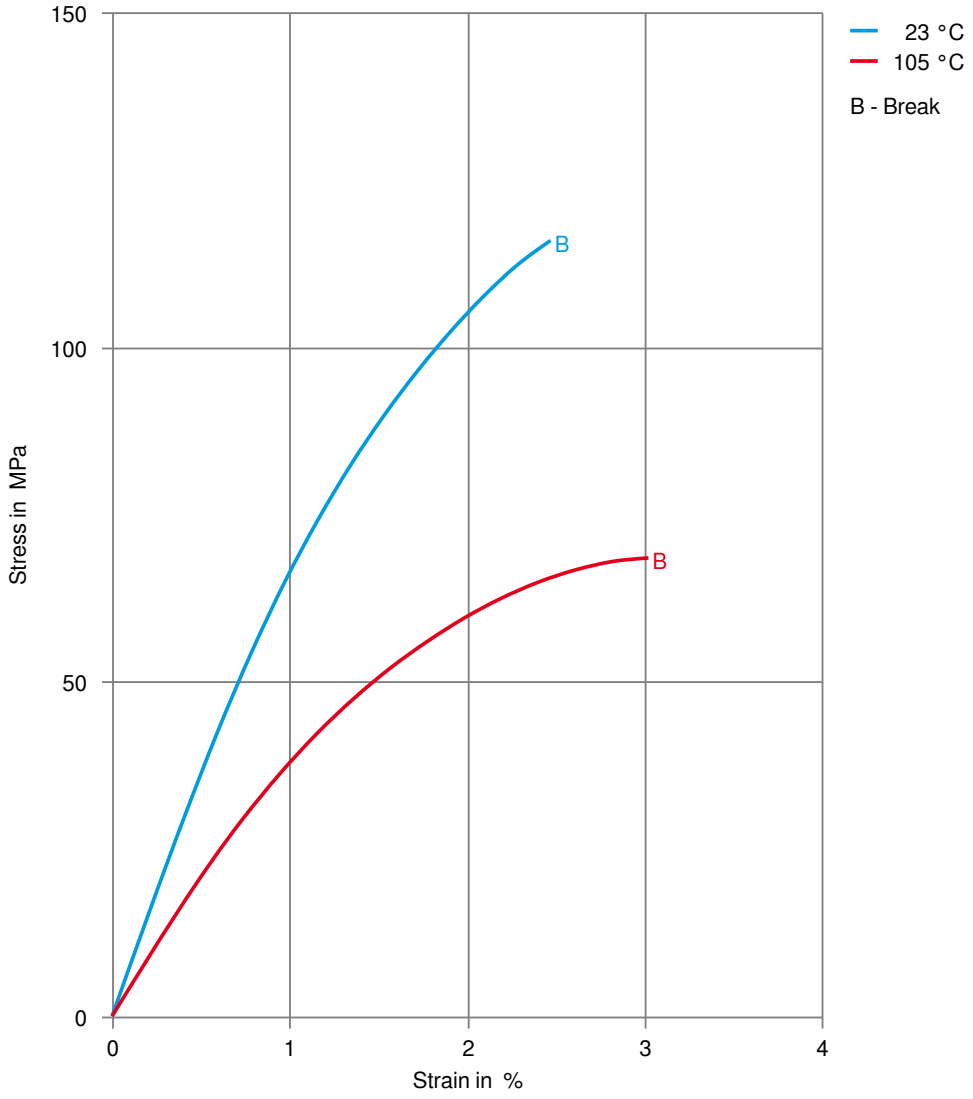
Stress-strain



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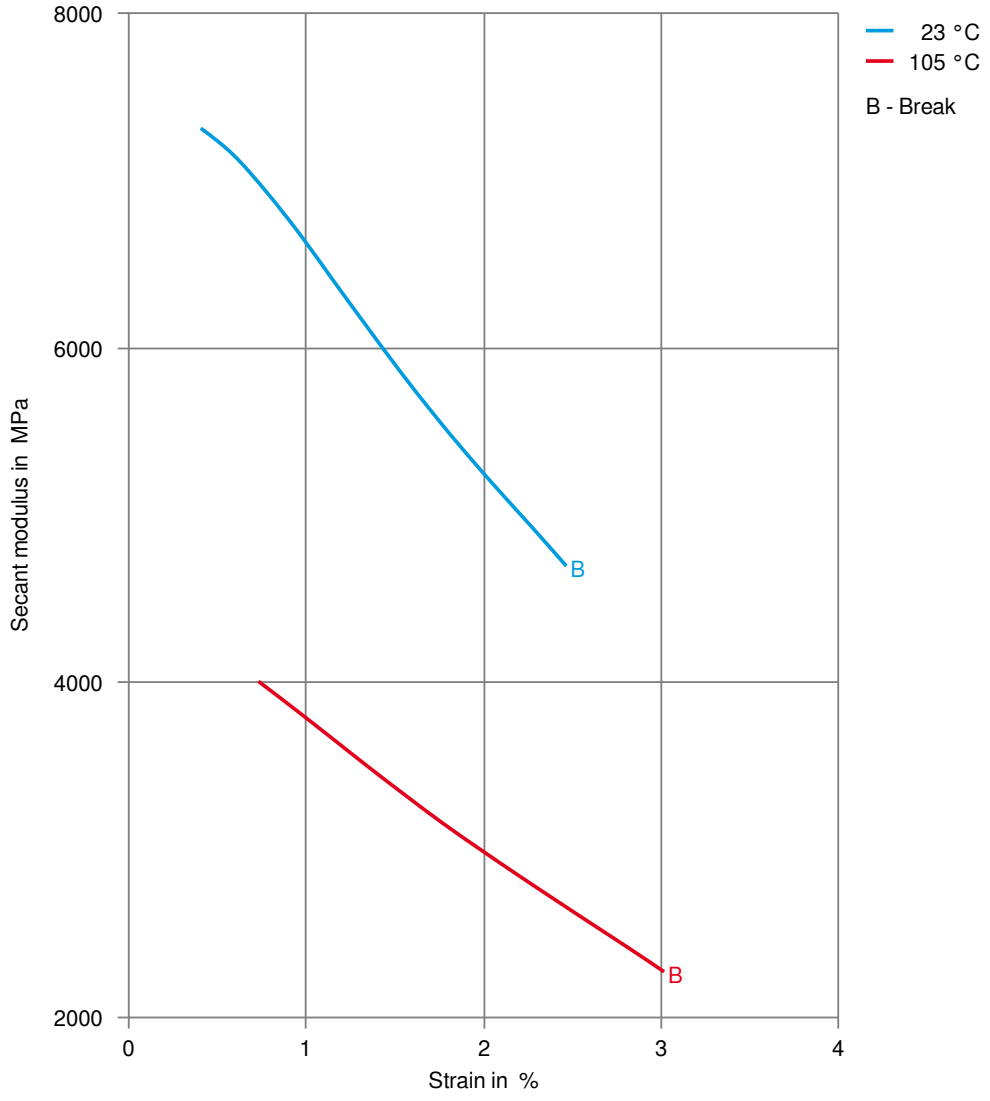
Secant modulus-strain



Revised: 2025-02-27 Source: Celanese Materials Database