CAMPUS® Datasheet

HOSTAFORM C 9021 GV3/20 - POM-GB20
Celanese

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The chemistry inside innovation™

Product Texts

Chemical abbreviation according to ISO 1043-1: POM
Molding compound ISO 9988- 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-warpagee molded parts with higher rigidity and hardness.

FMVSS = Federal Motor Vehicle Safety Standard (USA)
UL = Underwriters Laboratories (USA)

Rheological properties	Value	Unit	Test Standard
Melt volume-flow rate, MVR	**8.5**	cm³/10min	ISO 1133
Temperature	**190**	°C	ISO 1133
Load	**2.16**	kg	ISO 1133

Mechanical properties	Value	Unit	Test Standard
Tensile modulus	**3400**	MPa	ISO 527-1/-2
Yield stress	**46**	MPa	ISO 527-1/-2
Yield strain	**6.5**	%	ISO 527-1/-2
Nominal strain at break	**15**	%	ISO 527-1/-2
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/m²	ISO 179/1eU
Charpy impact strength, -30°C	**50**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	**3.5**	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	**3.5**	kJ/m²	ISO 179/1eA

Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	**166**	°C	ISO 11357-1/-3
Temp. of deflection under load, 1.80 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
Burning Behav. at 1.5 mm nom. thickn.	**HB**	class	IEC 60695-11-10
Thickness tested (1.5)	**1.5**	mm	IEC 60695-11-10
Yellow Card available	**Yes**	-	-
Burning Behav. at thickness h	**HB**	class	IEC 60695-11-10
Thickness tested (h)	**0.8**	mm	IEC 60695-11-10
Yellow Card available	**Yes**	-	-

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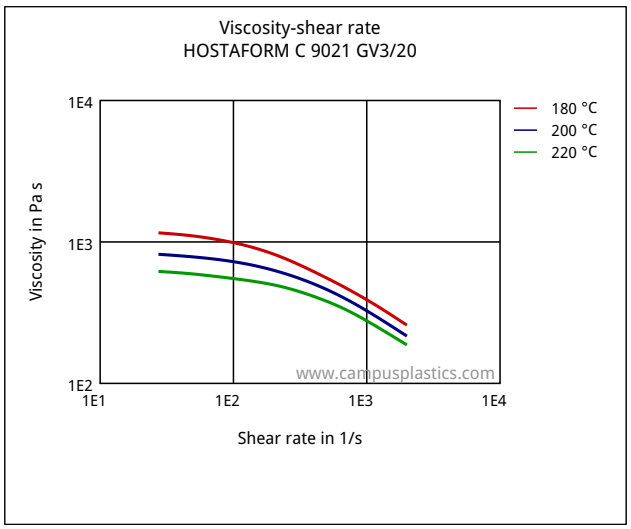
Electrical properties	Value	Unit	Test Standard
Relative permittivity, 100Hz	**4.5**	-	IEC 60250
Relative permittivity, 1MHz	**4.2**	-	IEC 60250
Dissipation factor, 100Hz	**200**	E-4	IEC 60250
Dissipation factor, 1MHz	**70**	E-4	IEC 60250
Volume resistivity	**1E12**	Ohm*m	IEC 60093
Surface resistivity	**1E14**	Ohm	IEC 60093
Electric strength	**35**	kV/mm	IEC 60243-1
Comparative tracking index	**600**	-	IEC 60112

Other properties	Value	Unit	Test Standard
Water absorption	**0.8**	%	Sim. to ISO 62
Humidity absorption	**0.15**	%	Sim. to ISO 62
Density	**1530**	kg/m³	ISO 1183

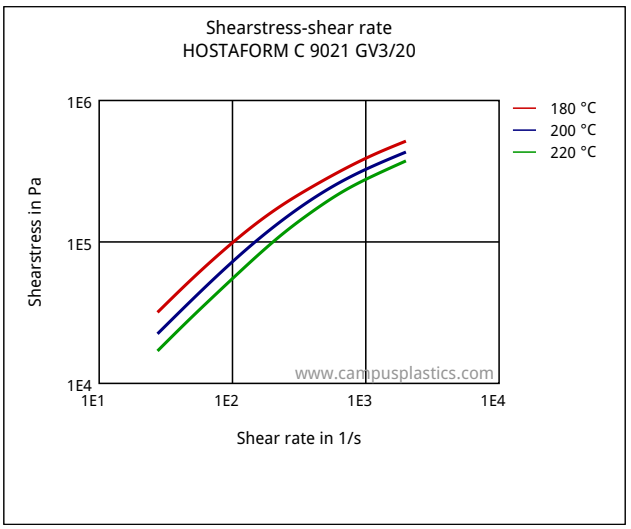
Test specimen production	Value	Unit	Test Standard
Processing conditions acc. ISO	**9988**	-	ISO ....-2
Injection Molding, melt temperature	**205**	°C	ISO 294
Injection Molding, mold temperature	**90**	°C	ISO 10724
Injection Molding, injection velocity	**200**	mm/s	ISO 294
Injection Molding, pressure at hold	**90**	MPa	ISO 294

Diagrams

Viscosity-shear rate



Shearstress-shear rate



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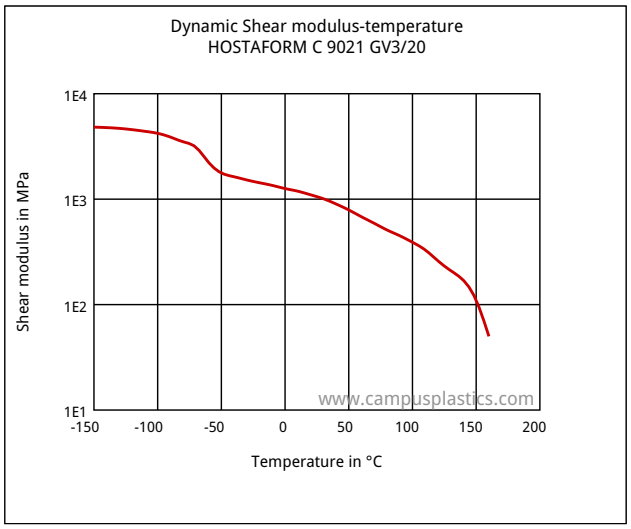
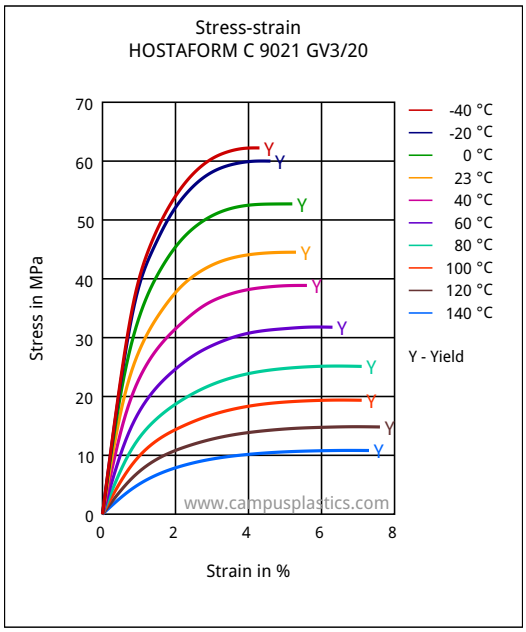
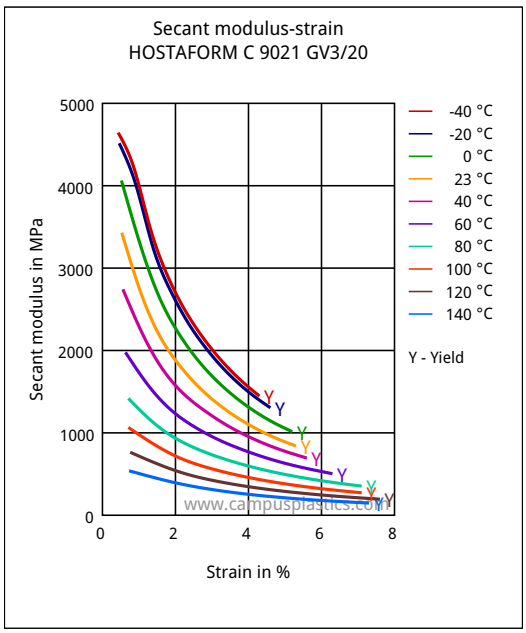
Dynamic Shear modulus-temperature



Stress-strain



Secant modulus-strain



Characteristics

Processing
Injection Molding

Additives
Release agent

Delivery form
Pellets

Regional Availability
North America, Europe, Asia Pacific, South and Central America, Near East/Africa

Other text 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.

Melt temperature 190-230 °C
Mould temperature 80-120 °C

POSTPROCESSING

Conditioning e.g. moisturizing is not necessary.

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material.
These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes.
Colorants or other additives may cause significant variations in data values.

Properties of molded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use.

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The products mentioned herein are not intended for use in medical or dental implants.