

CAMPUS® Datasheet

HOSTAFORM® C 9021 - POM
Celanese



Product Texts

Chemical abbreviation according to ISO 1043-1: POM Molding compound ISO 9988- POM-K, M-GNR, 03-002 POM copolymer Standard-Injection molding type with high rigidity, hardness and toughness; good chemical resistance to solvents, fuel and strong alkalis as well as good hydrolysis resistance; high resistance to thermal and oxidative degradation. Monomers and additives are listed in EU-Regulation (EU) 10/2011 FDA compliant according to 21 CFR 177.2470 UL-registration for all colours and a thickness more than 1.5 mm as UL 94 HB, temperature index UL 746 B electrical 110 °C, mechanical 90 °C. Burning rate ISO 3795 and FMVSS 302 < 75 mm/min for a thickness more than 1 mm. Ranges of applications: automotive engineering, precision engineering, electric and electronical industry, domestic appliances. FDA = Food and Drug Administration (USA) FMVSS = Federal Motor Vehicle Safety Standard (USA) UL = Underwriters Laboratories (USA)

Flammability @1.6mm nom. thickn.
Flammability at thickness h (3 mm)

HB
HB

UL recognition (1.6)
UL recognition (h)

Rheological properties	Value	Unit	Test Standard
Melt volume-flow rate, MVR	8	cm ³ /10min	ISO 1133
Temperature	190	°C	ISO 1133
Load	2.16	kg	ISO 1133
Molding shrinkage, parallel	2.0	%	ISO 294-4, 2577
Molding shrinkage, normal	1.9	%	ISO 294-4, 2577
Mechanical properties	Value	Unit	Test Standard
Tensile modulus	2850	MPa	ISO 527-1/-2
Yield stress	64	MPa	ISO 527-1/-2
Yield strain	9	%	ISO 527-1/-2
Nominal strain at break	30	%	ISO 527-1/-2
Charpy impact strength, +23°C	220P	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	220	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, +23°C	6.5	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	6	kJ/m ²	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	104	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	160	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	150	°C	ISO 306
Coeff. of linear therm. expansion, parallel	110	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal	110	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)	3.0	mm	IEC 60695-11-10
Yellow Card available	Yes	-	-
Electrical properties	Value	Unit	Test Standard
Relative permittivity, 100Hz	4	-	IEC 62631-2-1
Relative permittivity, 1MHz	4	-	IEC 62631-2-1
Dissipation factor, 100Hz	20	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	50	E-4	IEC 62631-2-1

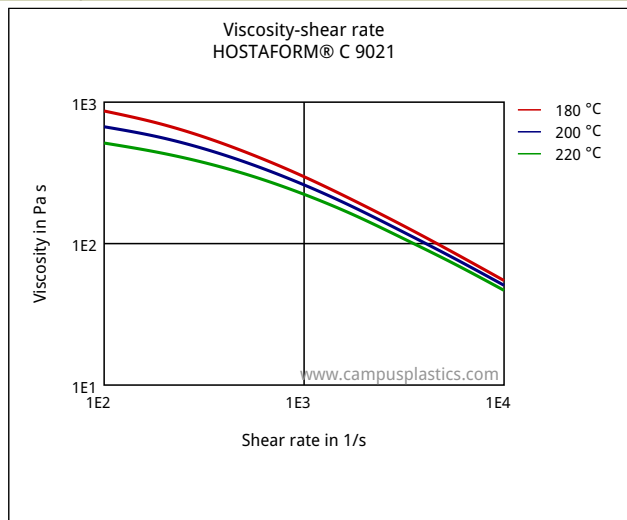
HOSTAFORM® C 9021 - POM

Celanese

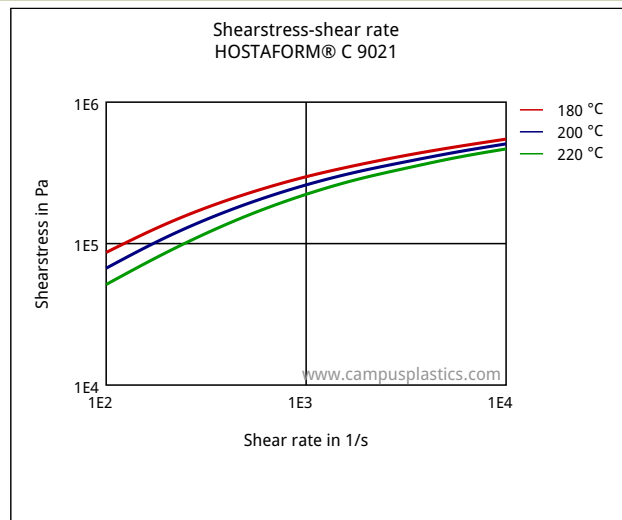
Volume resistivity	1E12	Ohm*m	IEC 62631-3-1
Surface resistivity	1E14	Ohm	IEC 62631-3-2
Electric strength	35	kV/mm	IEC 60243-1
Comparative tracking index	600	-	IEC 60112
Other properties	Value	Unit	Test Standard
Water absorption	0.65	%	Sim. to ISO 62
Humidity absorption	0.2	%	Sim. to ISO 62
Density	1410	kg/m ³	ISO 1183
Rheological calculation properties	Value	Unit	Test Standard
Density of melt	1200	kg/m ³	-
Thermal conductivity of melt	0.155	W/(m K)	-
Spec. heat capacity melt	2210	J/(kg K)	-
Eff. thermal diffusivity	4.85E-8	m ² /s	-
Ejection temperature	140	°C	-

Diagrams

Viscosity-shear rate

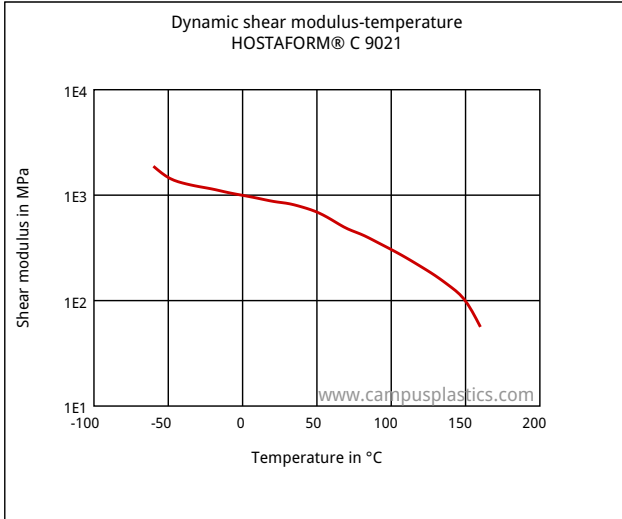


Shearstress-shear rate

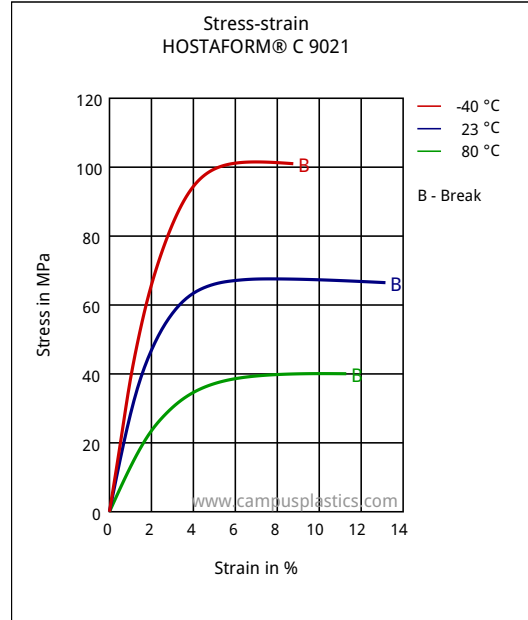


HOSTAFORM® C 9021 - POM
Celanese

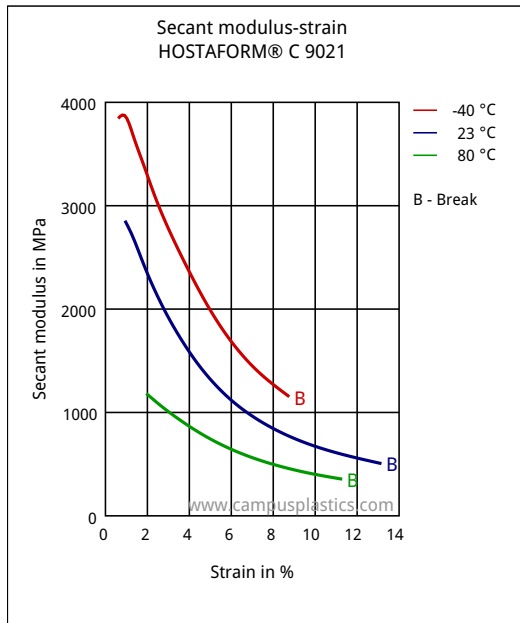
Dynamic shear modulus-temperature



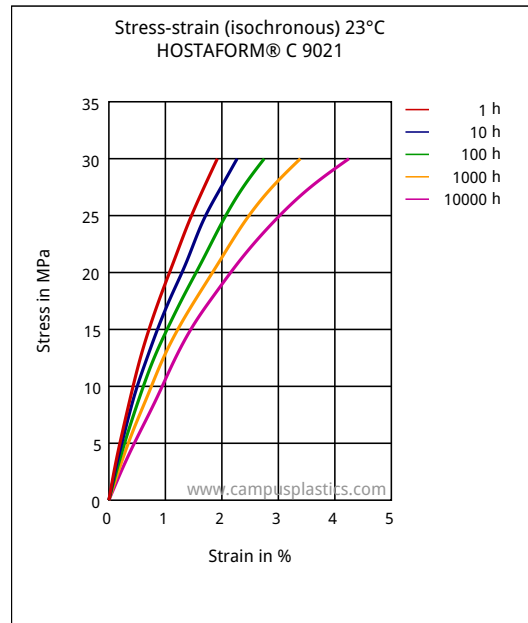
Stress-strain



Secant modulus-strain



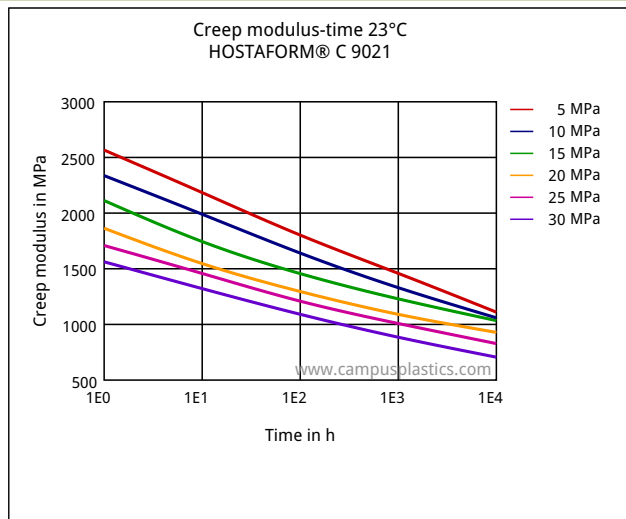
Stress-strain (isochronous) 23°C



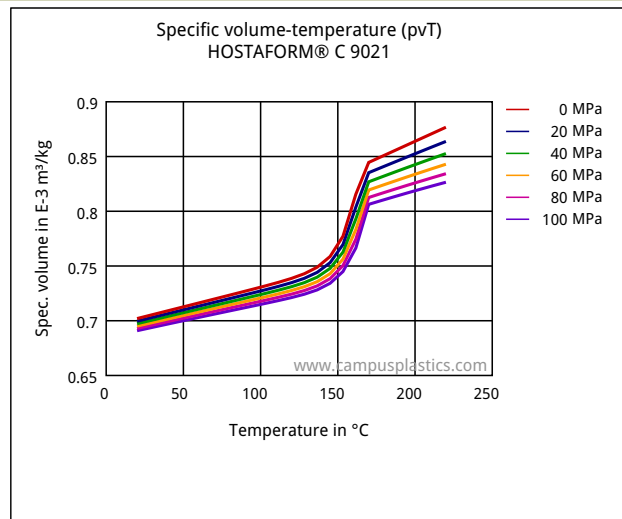
HOSTAFORM® C 9021 - POM

Celanese

Creep modulus-time 23°C



Specific volume-temperature (pVT)



Characteristics

Processing

Injection Molding, Film Extrusion, Sheet Extrusion, Other Extrusion, Blow Molding

Delivery form

Pellets

Other text information

Injection molding

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 %

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

Melt temperature 190-210 °C

Mould temperature 80-120 °C

Conditioning e.g. moisturizing is not necessary.

Film extrusion

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 %

Standard extruders with grooved feed zone and short compression screws (minimum 25 D) will fit.

Additives

Release agent

HOSTAFORM® C 9021 - POM

Celanese

Melt temperature 180-190 °C
Conditioning e.g. moisturizing is not necessary.

In case of very thick wall thickness profiles after-annealing it is recommended to reduce internal stress.

Annealing temperature 130-140 °C
Annealing time 10 min/mm thickness

Other extrusion

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 %

Standard extruders with grooved feed zone and short compression screws (minimum 25 D) will fit.

Melt temperature 180-190 °C

Conditioning e.g. moisturizing is not necessary.

In case of very thick wall thickness profiles after-annealing it is recommended to reduce internal stress.

Annealing temperature 130-140 °C
Annealing time 10 min/mm thickness

Sheet extrusion

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 %

Standard extruders with grooved feed zone and short compression screws (minimum 25 D) will fit.

Melt temperature 180-190 °C

Conditioning e.g. moisturizing is not necessary.

In case of very thick wall thickness profiles after-annealing it is recommended to reduce internal stress.

Annealing temperature 130-140 °C
Annealing time 10 min/mm thickness

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

HOSTAFORM® C 9021 - POM

Celanese

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. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products. The products mentioned herein are not intended for use in medical or dental implants.