

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.

Fulfils EG-directive 2002/72/EU as well as the recommendation XXXIII for consumer goods of the BgVV,
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)

BgVV = Bundesinstitut für gesundheitlichen Verbraucherschutz und
Veterinärmedizin

FMVSS = Federal Motor Vehicle Safety Standard (USA)

UL = Underwriters Laboratories (USA)

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	1.8	%	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
Tensile creep modulus, 1h	2500	MPa	ISO 899-1
Tensile creep modulus, 1000h	1300	MPa	ISO 899-1
Charpy impact strength, +23 °C	180 ^[P]	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30 °C	160	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

P: Partial Break

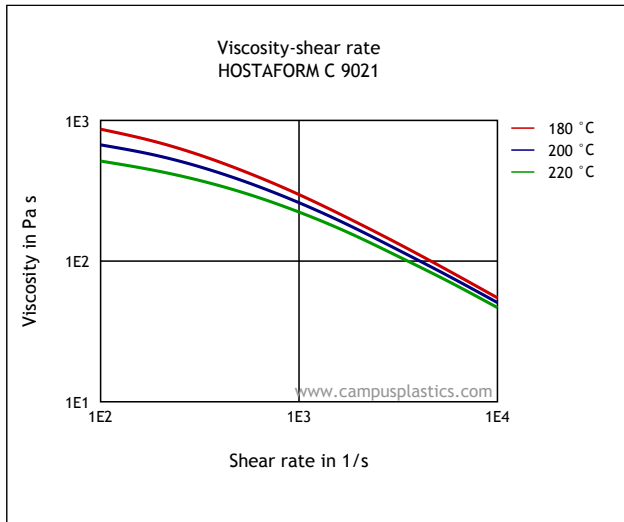
HOSTAFORM C 9021 - POM
Celanese

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
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 60250
Relative permittivity, 1MHz	4	-	IEC 60250
Dissipation factor, 100Hz	20	E-4	IEC 60250
Dissipation factor, 1MHz	50	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	0.65	%	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	165	°C	-
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

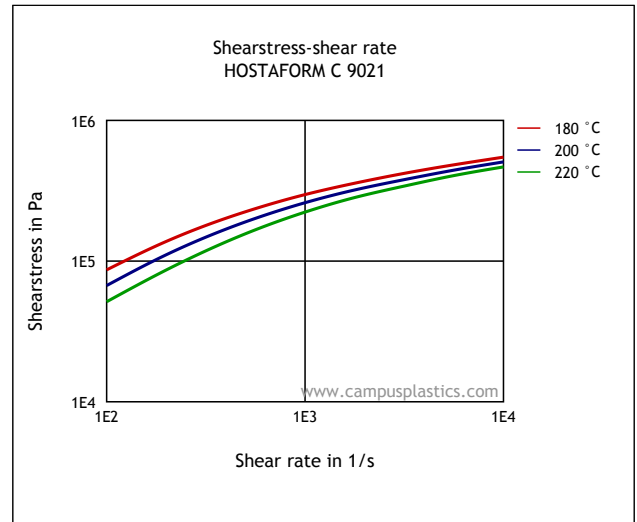
HOSTAFORM C 9021 - POM
Celanese

Diagrams

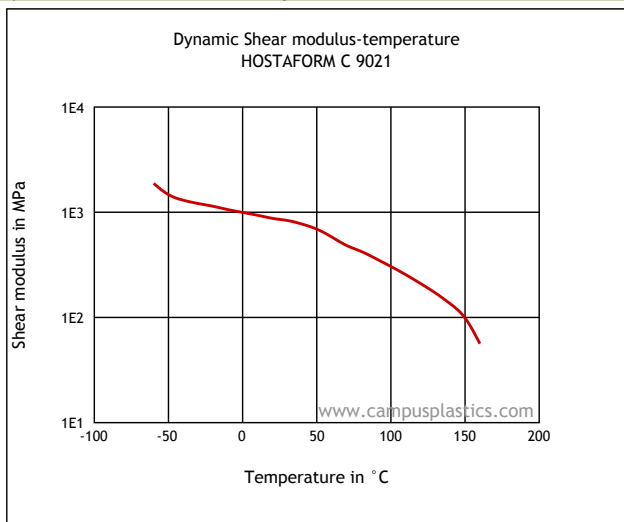
Viscosity-shear rate



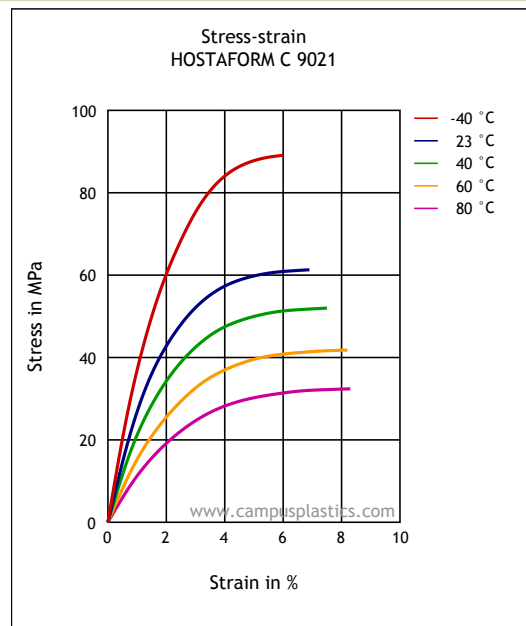
Shearstress-shear rate



Dynamic Shear modulus-temperature

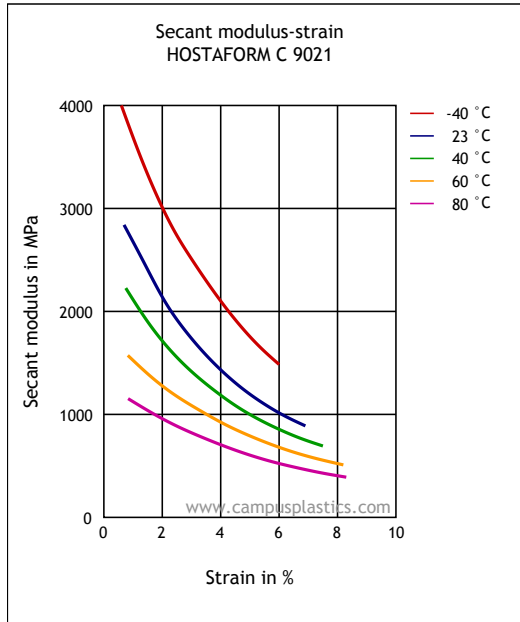


Stress-strain

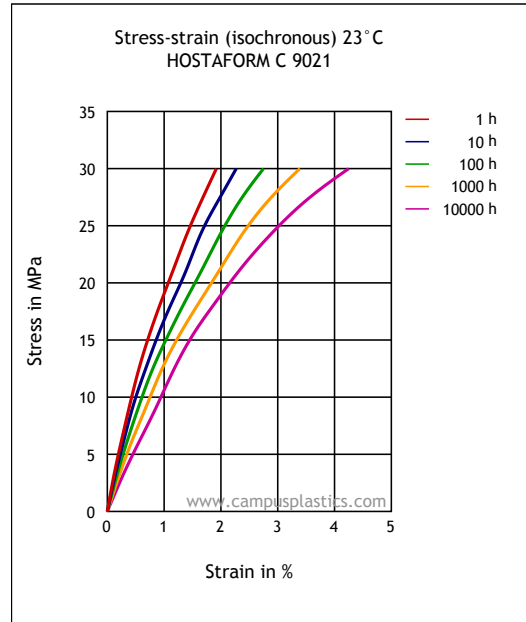


HOSTAFORM C 9021 - POM
Celanese

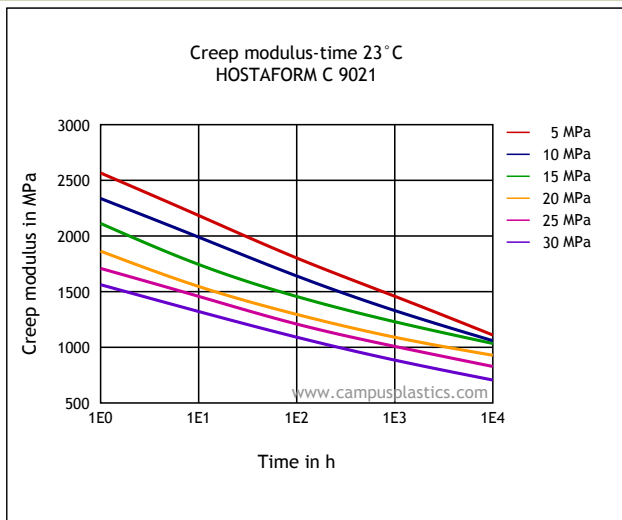
Secant modulus-strain



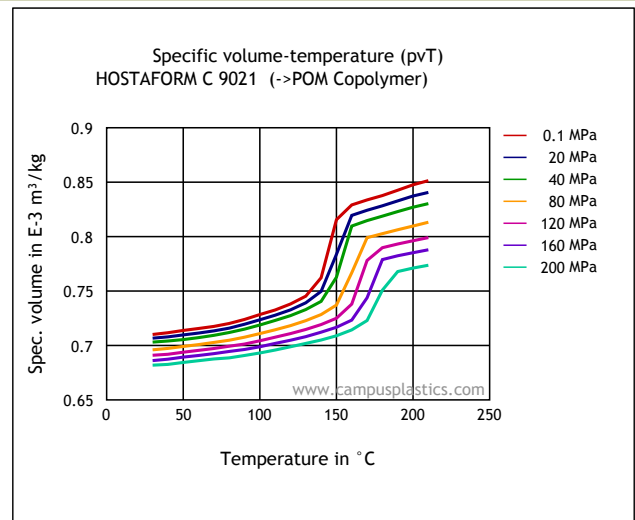
Stress-strain (isochronous) 23 °C



Creep modulus-time 23 °C



Specific volume-temperature (pvT)



Characteristics

Processing

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

Delivery form

Pellets

Other text information

Injection molding

PREPROCESSING

Additives

Release agent

Regional Availability

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

HOSTAFORM C 9021 - POM

Celanese

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.

Film extrusion

PREPROCESSING

General drying is not necessary due to low moisture absorption of the resin.

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Max. Water content 0,2 %

PROCESSING

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

Melt temperature 180-190 °C

POSTPROCESSING

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

PREPROCESSING

General drying is not necessary due to low moisture absorption of

HOSTAFORM C 9021 - POM Celanese

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.

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PROCESSING

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Melt temperature 180-190 °C

POSTPROCESSING

Conditioning e.g. moisturizing is not necessary.

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

Sheet extrusion

PREPROCESSING

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Max. Water content 0,2 %

PROCESSING

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

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Conditioning e.g. moisturizing is not necessary.

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HOSTAFORM C 9021 - POM Celanese

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 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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