CAMPUS® Datasheet

HOSTAFORM® C 9021 - POM
Celanese

Celanese
The chemistry inside innovation™

Product Texts
Chemical abbreviation according to ISO 1043-1: POM Molding compound ISO 29988- POM-K, M-GNR, 03-002 POM copolymer Medium viscosity molding grade 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)

Rheological properties	Value	Unit	Test Standard
Melt volume-flow rate, MVR	**8**	cm³/10min	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
Tensile creep modulus, 1h	**2500**	MPa	ISO 899-1
Tensile creep modulus, 1000h	**1300**	MPa	ISO 899-1
Charpy impact strength, +23°C	**220P**	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	**220**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, +23°C	**6.5**	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	**6**	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	**104**	°C	ISO 75-1/-2
Temp. of deflection under load, 0.45 MPa	**160**	°C	ISO 75-1/-2
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 behavior at 1.5 mm nominal thickness	**HB**	class	IEC 60695-11-10
Thickness tested (1.5)	**1.5**	mm	IEC 60695-11-10
Burning behavior 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
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

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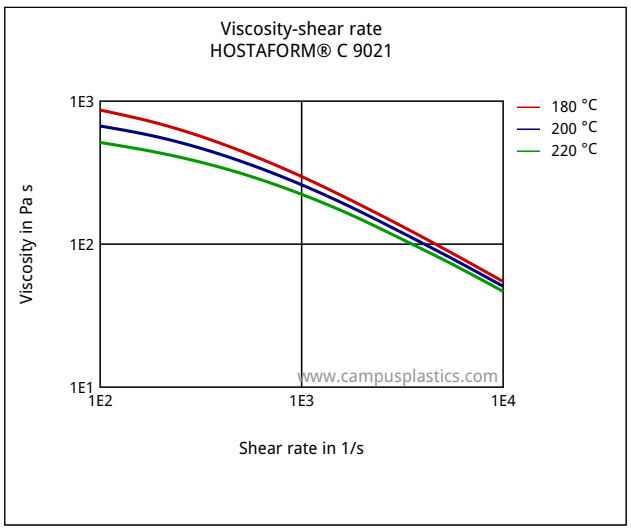
Other properties	Value	Unit	Test Standard
Water absorption	**0.65**	%	Sim. to ISO 62
Humidity absorption	**0.2**	%	Sim. to ISO 62
Density	**1410**	kg/m³	ISO 1183

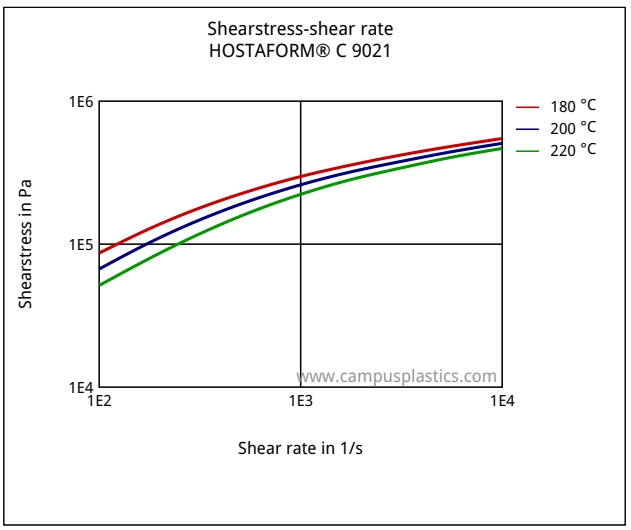
Rheological calculation properties	Value	Unit	Test Standard
Thermal conductivity of melt	**0.155**	W/(m K)	-
Ejection temperature	**127**	°C	-

Diagrams

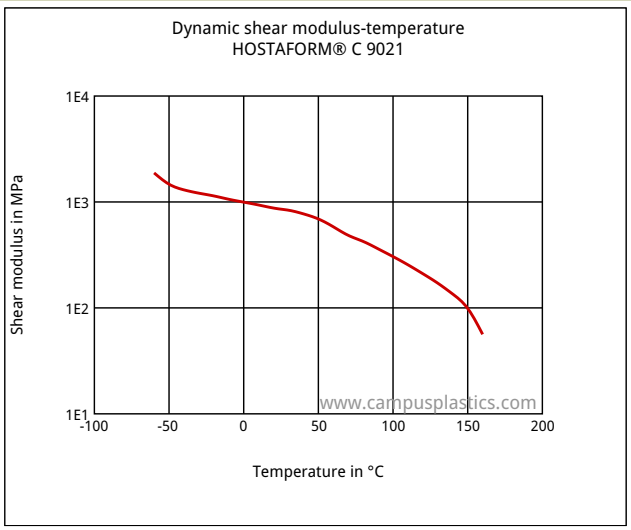
Viscosity-shear rate



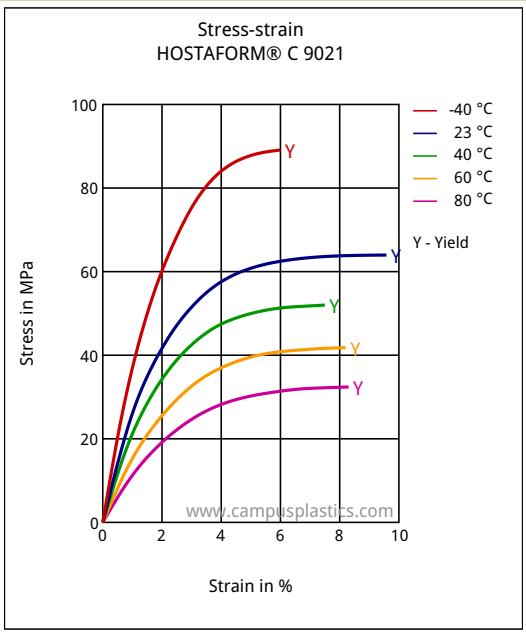
Shearstress-shear rate



Dynamic shear modulus-temperature



Stress-strain



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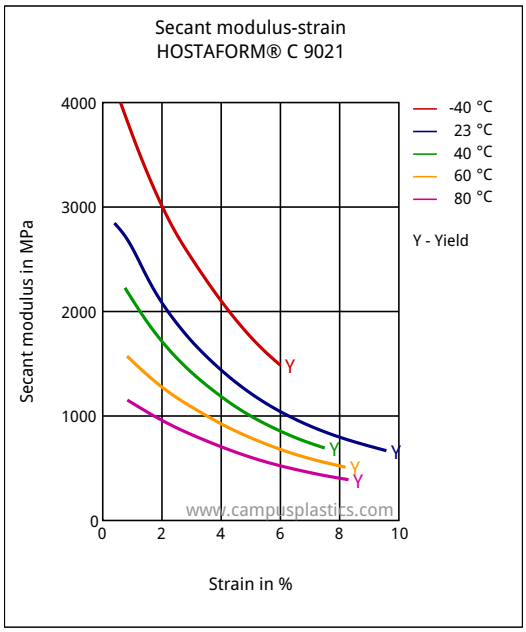
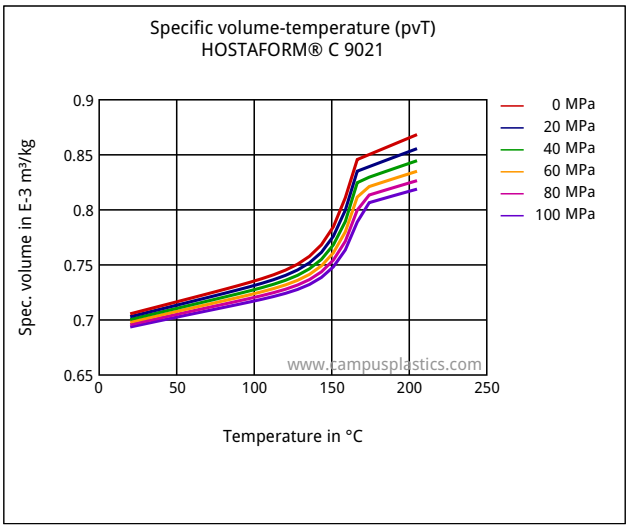
Secant modulus-strain



Specific volume-temperature (pvT)



Characteristics

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

Delivery form
Pellets

Additives
Release agent

Regional Availability
North America, Europe, Asia Pacific, South and Central America

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.

Postprocessing

Conditioning e.g. moisturizing is not necessary.

Film extrusion

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 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 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 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

Sheet extrusion

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 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.

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