HOSTAFORM® C 9021 SW | POM | Tribological

Description

Chemical abbreviation according to ISO 1043-1: POM
Molding compound ISO 9988- POM-K, M-GNS, 02-002, K10

POM copolymer

Injection molding type, special modified with anti-friction additives for prevention of squeaking noise; good chemical resistance to solvents, fuel and strong alkalis as well as good hydrolysis resistance; high resistance to thermal and oxidative degradation.

UL-registration in natural and black and a thickness more than 1.5 mm as UL 94 HB.

Burning rate ISO 3795 and FMVSS 302 < 100 mm/min for a thickness more than 1,5 mm.

Ranges of applications: For sliding combinations with low wear and low coefficient of friction, prevents squeaking noise.

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

Physical properties	Value	Unit	Test Standard
Density	**1420**	kg/m³	ISO 1183
Melt volume rate (MVR)	**6.5**	cm³/10min	ISO 1133
MVR test temperature	**190**	°C	ISO 1133
MVR test load	**2.16**	kg	ISO 1133
Mold shrinkage - parallel	**2**	%	ISO 294-4
Mold shrinkage - normal	**1.8**	%	ISO 294-4
Water absorption (23°C-sat)	**1.2**	%	ISO 62

Mechanical properties	Value	Unit	Test Standard
Tensile modulus (1mm/min)	**2850**	MPa	ISO 527-2/1A
Tensile stress at yield (50mm/min)	**53**	MPa	ISO 527-2/1A
Tensile strain at yield (50mm/min)	**7**	%	ISO 527-2/1A
Nominal strain at break (50mm/min)	**16**	%	ISO 527-2/1A
Tensile creep modulus (1h)	**2400**	MPa	ISO 899-1
Tensile creep modulus (1000h)	**1200**	MPa	ISO 899-1
Charpy impact strength @ 23°C	**90**	kJ/m²	ISO 179/1eU
Charpy impact strength @ -30°C	**85**	kJ/m²	ISO 179/1eU
Charpy notched impact strength @ 23°C	**4**	kJ/m²	ISO 179/1eA
Charpy notched impact strength @ -30°C	**4**	kJ/m²	ISO 179/1eA

Thermal properties	Value	Unit	Test Standard
Melting temperature (10°C/min)	**166**	°C	ISO 11357-1,-2,-3
DTUL @ 1.8 MPa	**80**	°C	ISO 75-1/-2
Coeff.of linear therm. expansion (parallel)	**1.2**	E-4/°C	ISO 11359-2
Flammability @1.6mm nom. thickn.	**HB**	class	UL94
thickness tested (1.6)	**1.57**	mm	UL94
UL recognition (1.6)	**UL**	-	UL94

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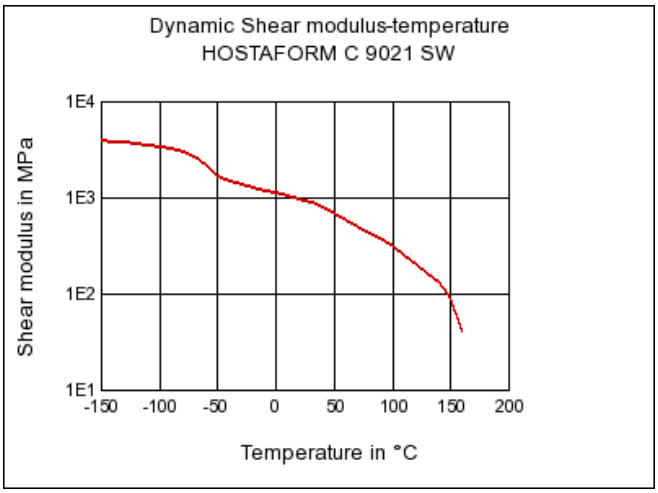
Thermal properties	Value	Unit	Test Standard
Flammability at thickness h	**HB**	class	UL94
thickness tested (h)	**3.18**	mm	UL94
UL recognition (h)	**UL**	-	UL94

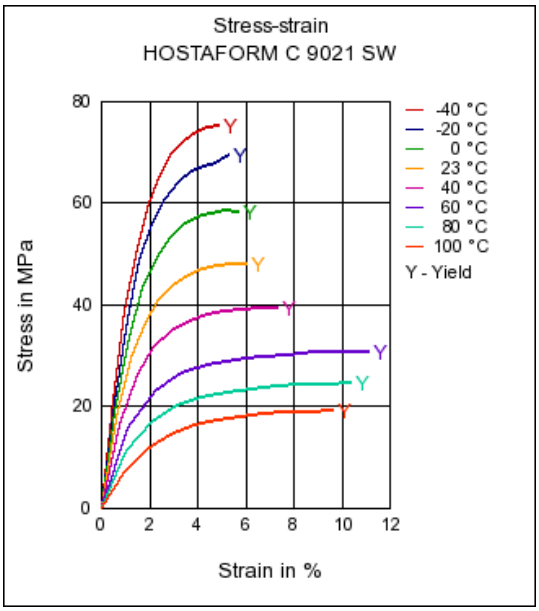
Electrical properties	Value	Unit	Test Standard
Relative permittivity - 100 Hz	**4.1**	-	IEC 60250
Relative permittivity - 1 MHz	**4.1**	-	IEC 60250
Dissipation factor - 100 Hz	**35**	E-4	IEC 60250
Dissipation factor - 1 MHz	**75**	E-4	IEC 60250
Volume resistivity	**1E12**	Ohm*m	IEC 60093
Surface resistivity	**1E14**	Ohm	IEC 60093
Comparative tracking index CTI	**600**	-	IEC 60112

Test specimen production	Value	Unit	Test Standard
Processing conditions acc. ISO	**9988**	-	Internal

Dynamic Shear modulus-temperature



Stress-strain



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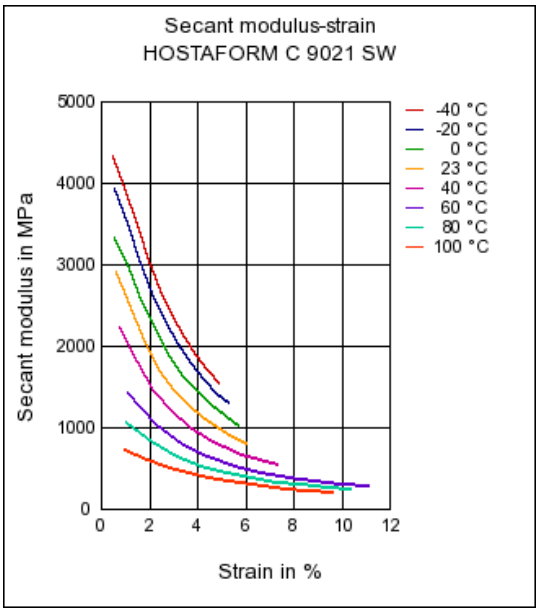
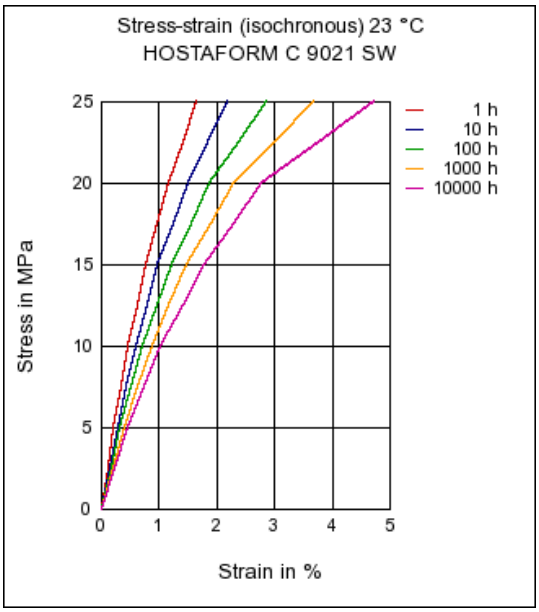
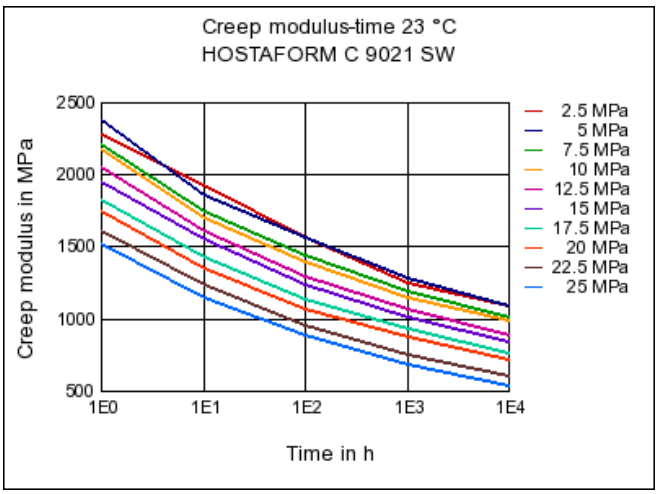
Secant modulus-strain



Stress-strain (isochronous)



Creep modulus-time



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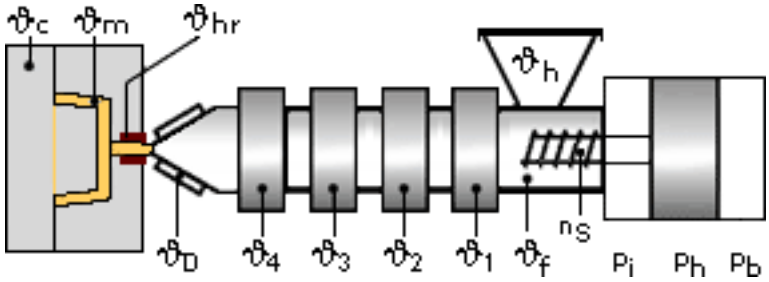
Typical injection moulding processing conditions



Pre Drying:

Necessary low maximum residual moisture content: 0.15%

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.

The product can then be stored in standard conditions until processed.

Drying time: 3 - 4 h

Drying temperature: 100 - 120 °C

Temperature:

	ϑManifold	ϑMold	ϑMelt	ϑNozzle	ϑZone4	ϑZone3	ϑZone2	ϑZone1	ϑFeed	ϑHopper
min (°C)	190	80	190	190	190	190	180	170	60	20
max (°C)	210	120	210	210	210	200	190	180	80	30

Pressure:

	Inj press	Hold press	Back pressure
min (bar)	600	600	0
max (bar)	1200	1200	20

Speed:

Injection speed: slow

Screw speed

Screw diameter (mm)	16	25	40	55	75
Screw speed (RPM)	-	150	100	70	-

Injection Molding

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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
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