

HOSTAFORM® C 9021 AW XAP²™ LS | POM | Tribological

Description

POM copolymer

Injection molding type like C 9021, with special additive modified; good chemical resistance to solvents, fuel and strong alkalis as well as good hydrolysis resistance; high resistance to thermal and oxidative degradation; good wear properties and low coefficient of friction.

Reduced emission grade. Emissions according to VDA 275 < 5 mg/kg

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

Ranges of applications: sliding parts for window lifter.

FMVSS = Federal Motor Vehicle Safety Standard (USA)

Preliminary Data Sheet

Physical properties	Value	Unit	Test Standard
Density	1380	kg/m ³	ISO 1183
Melt volume rate (MVR)	8	cm ³ /10min	ISO 1133
MVR test temperature	190	°C	ISO 1133
MVR test load	2.16	kg	ISO 1133
Mold shrinkage - parallel	1.8	%	ISO 294-4
Mold shrinkage - normal	1.6	%	ISO 294-4
Water absorption (23°C-sat)	0.65	%	ISO 62

Mechanical properties	Value	Unit	Test Standard
Tensile modulus (1mm/min)	2450	MPa	ISO 527-2/1A
Tensile stress at yield (50mm/min)	57	MPa	ISO 527-2/1A
Tensile strain at yield (50mm/min)	8	%	ISO 527-2/1A
Nominal strain at break (50mm/min)	20	%	ISO 527-2/1A
Flexural modulus (23°C)	2150	MPa	ISO 178
Charpy impact strength @ 23°C	130.0	kJ/m ²	ISO 179/1eU
Charpy impact strength @ -30°C	110.0	kJ/m ²	ISO 179/1eU
Charpy notched impact strength @ 23°C	5.5	kJ/m ²	ISO 179/1eA
Charpy notched impact strength @ -30°C	5	kJ/m ²	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	88	°C	ISO 75-1/-2
Coeff.of linear therm. expansion (parallel)	1.1	E-4/°C	ISO 11359-2

Electrical properties	Value	Unit	Test Standard
Relative permittivity - 100 Hz	3.8	-	IEC 60250
Relative permittivity - 1 MHz	3.8	-	IEC 60250
Dissipation factor - 100 Hz	20	E-4	IEC 60250
Dissipation factor - 1 MHz	50	E-4	IEC 60250
Volume resistivity	1E12	Ohm*m	IEC 60093

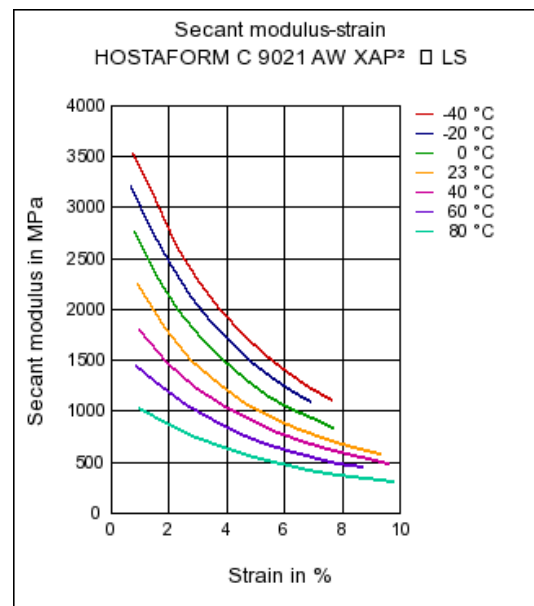
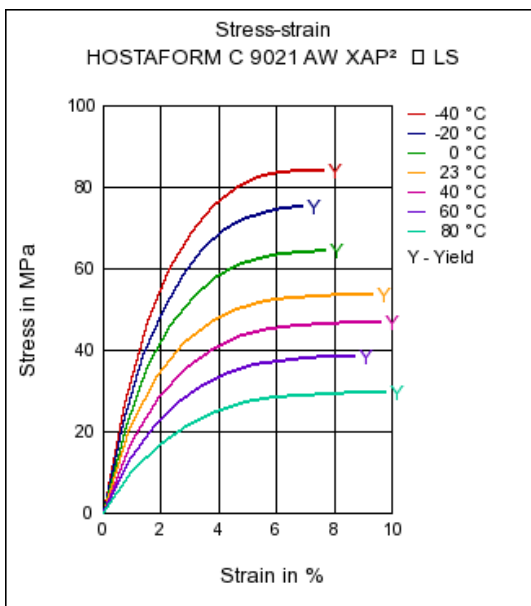
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Electrical properties	Value	Unit	Test Standard
Surface resistivity	1E14	Ohm	IEC 60093
Electric strength	35	kV/mm	IEC 60243-1
Comparative tracking index CTI	600	-	IEC 60112

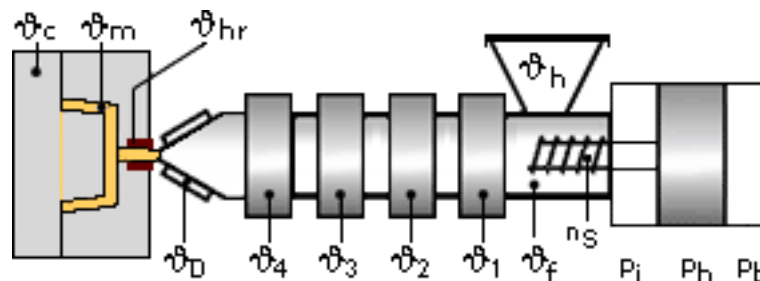
Test specimen production	Value	Unit	Test Standard
Processing conditions acc. ISO	9988	-	Internal

Stress-strain

Secant modulus-strain



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.

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

Drying time: 3 - 4 h

Drying temperature: 100 - 120 °C

Temperature:

	ϑ _{Manifold}	ϑ _{Mold}	ϑ _{Melt}	ϑ _{Nozzle}	ϑ _{Zone4}	ϑ _{Zone3}	ϑ _{Zone2}	ϑ _{Zone1}	ϑ _{Feed}	ϑ _{Hopper}
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	-

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General Disclaimer

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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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 (+49 (0) 69 30516299 for Europe and +1 859-372-3244 for the Americas) for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products.

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