

HOSTAFORM® M10AE | POM | Unfilled

Description

POM copolymer

Stiff-flowing type with high melt strength; good chemical resistance to solvents, fuel and strong alkalis as well as good hydrolysis resistance; high resistance to thermal and oxidative degradation.

Fulfills EG-directive 2002/72/EU as well as the recommendation XXXIII for consumer goods of the BgVV, corresponding to FDA-regulation for food contact.

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

Ranges of applications: For extrusion blow molding, and for injection molding thick-walled, void-free molded parts.

Physical properties	Value	Unit	Test Standard
Density	1410	kg/m ³	ISO 1183
Melt volume rate (MVR)	0.9	cm ³ /10min	ISO 1133
MVR test temperature	190	°C	ISO 1133
MVR test load	2.16	kg	ISO 1133
Water absorption (23°C-sat)	0.65	%	ISO 62

Mechanical properties	Value	Unit	Test Standard
Tensile modulus (1mm/min)	2900	MPa	ISO 527-2/1A
Tensile stress at yield (50mm/min)	65	MPa	ISO 527-2/1A
Tensile strain at yield (50mm/min)	9	%	ISO 527-2/1A
Nominal strain at break (50mm/min)	25	%	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	220P	kJ/m ²	ISO 179/1eU
Charpy impact strength @ -30°C	200	kJ/m ²	ISO 179/1eU
Charpy notched impact strength @ 23°C	10	kJ/m ²	ISO 179/1eA
Charpy notched impact strength @ -30°C	8	kJ/m ²	ISO 179/1eA

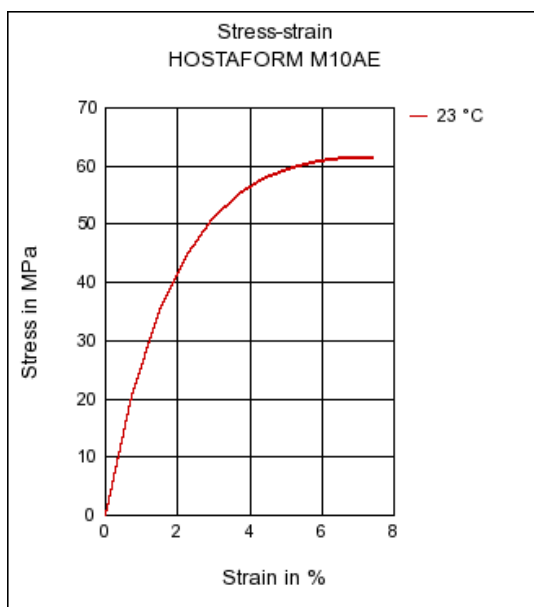
Thermal properties	Value	Unit	Test Standard
Melting temperature (10°C/min)	167	°C	ISO 11357-1,-2,-3
DTUL @ 1.8 MPa	97	°C	ISO 75-1/-2
Coeff.of linear therm. expansion (parallel)	1.3	E-4/°C	ISO 11359-2

Electrical properties	Value	Unit	Test Standard
Relative permittivity - 100 Hz	4	-	IEC 60250
Relative permittivity - 1 MHz	4	-	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
Surface resistivity	1E14	Ohm	IEC 60093
Electric strength	28	kV/mm	IEC 60243-1
Comparative tracking index CTI	600	-	IEC 60112

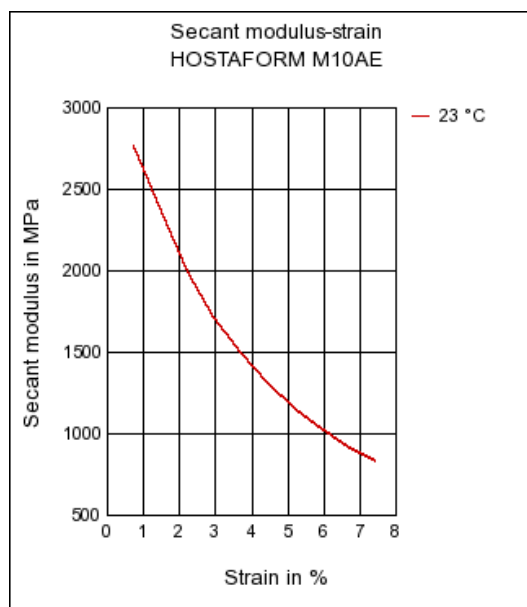
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Test specimen production	Value	Unit	Test Standard
Processing conditions acc. ISO	9988	-	Internal

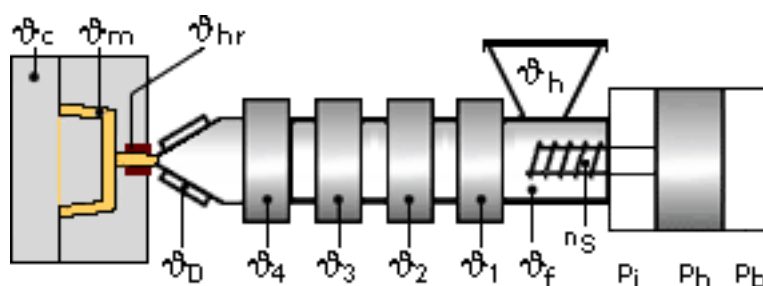
Stress-strain



Secant modulus-strain



Typical injection moulding processing conditions



Pre Drying:

Necessary low maximum residual moisture content: 0.15%

It is normally not necessary to dry HOSTAFORM. However, should there be surface moisture (condensate) on the molding compound as a result of incorrect storage, drying is required. A circulating air drying cabinet can be used for this purpose if the granules

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

Drying time: 3 - 4 h

Drying temperature: 120 - 140 °C

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Temperature:

	ϕ _{Manifold}	ϕ _{Mold}	ϕ _{Melt}	ϕ _{Nozzle}	ϕ _{Zone4}	ϕ _{Zone3}	ϕ _{Zone2}	ϕ _{Zone1}	ϕ _{Feed}	ϕ _{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	40

Speed:

Injection speed: slow-medium

Screw speed

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

Injection Molding

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

Film Extrusion

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

Melt temperature	180-190 °C
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Other Extrusion

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

Melt temperature	180-190 °C
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Profile Extrusion

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

Melt temperature	180-190 °C
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Sheet Extrusion

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

Melt temperature 180-190 °C

Blow Molding

Standard extruders with plasticating screws (20 to 25 D) will fit.

Melt temperature 180-190 °C

Mould-surface temperature 60-100 °C

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General Disclaimer

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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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