Celanese
The chemistry inside innovation™

HOSTAFORM® M10AE - POM

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. Monomers and additives are listed in EU-Regulation (EU) 10/2011 FDA compliant according to 21 CFR 177.2470 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/m³	ISO 1183
Melt volume rate, MVR	**0.9**	cm³/10min	ISO 1133
MVR temperature	**190**	°C	ISO 1133
MVR load	**2.16**	kg	ISO 1133
Water absorption, 23°C-sat	**0.65**	%	ISO 62
Humidity absorption, 23°C/50%RH	**0.2**	%	ISO 62

Mechanical properties	Value	Unit	Test Standard
Tensile modulus	**2800**	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
Tensile 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	**220**[P]	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	**200**	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	**10**	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	**8**	kJ/m²	ISO 179/1eA

P: Partial Break

Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	**167**	°C	ISO 11357-1/-3
DTUL at 1.8 MPa	**97**	°C	ISO 75-1, -2
Vicat softening temperature, 50°C/h 50N	**150**	°C	ISO 306
Coeff. of linear therm expansion, parallel	**1.3**	E-4/°C	ISO 11359-2

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	**28**	kV/mm	IEC 60243-1
Comparative tracking index	**600**	-	IEC 60112

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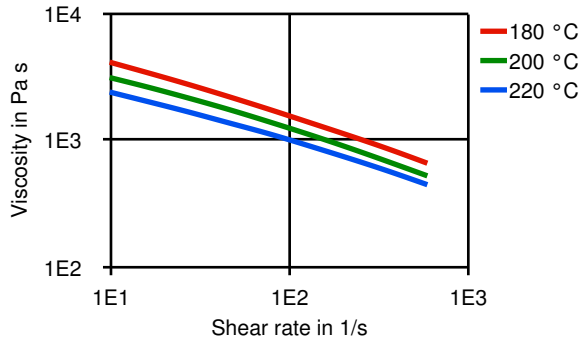
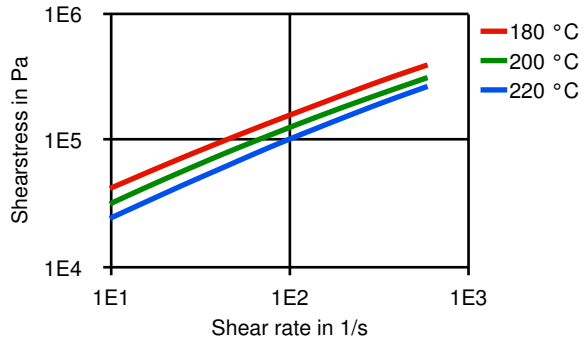
Diagrams

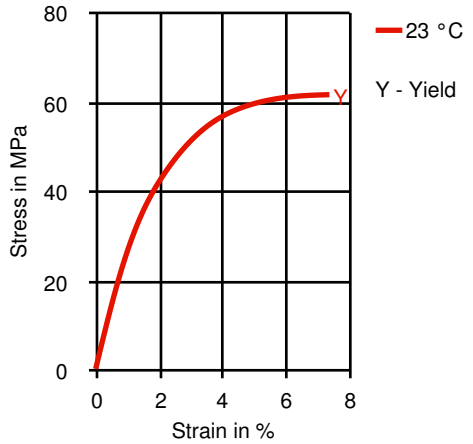
Viscosity-shear rate



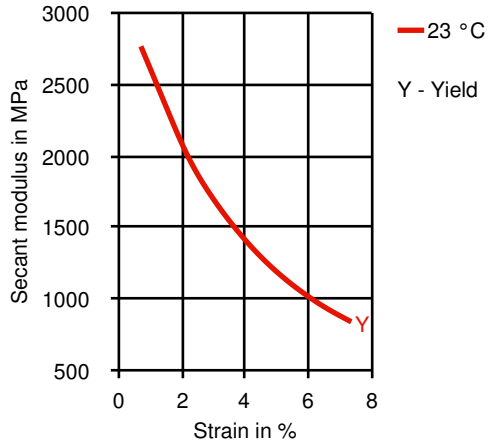
Shearstress-shear rate



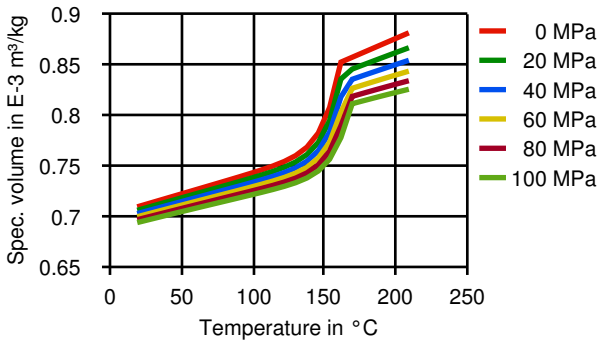
Stress-strain



Secant modulus-strain



Moldflow Specific volume-temperature (pvT)



Typical injection moulding processing conditions

Pre Drying	Value	Unit	Test Standard
Necessary low maximum residual moisture content	**0.15**	%	-
Drying time	**3 - 4**	h	-
Drying temperature	**100 - 120**	°C	-
Temperature	**Value**	**Unit**	**Test Standard**
Hopper temperature	**20 - 30**	°C	-
Feeding zone temperature	**60 - 80**	°C	-
Zone1 temperature	**170 - 180**	°C	-
Zone2 temperature	**180 - 190**	°C	-
Zone3 temperature	**190 - 200**	°C	-

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Zone4 temperature	**190 - 210**	°C	-
Nozzle temperature	**190 - 210**	°C	-
Melt temperature	**190 - 210**	°C	-
Mold temperature	**80 - 120**	°C	-
Hot runner temperature	**190 - 210**	°C	-
Pressure	**Value**	**Unit**	**Test Standard**
Back pressure max.	**40**	bar	-
Speed	**Value**	**Unit**	**Test Standard**
Injection speed	**slow-medium**	-	-
Screw Speed	**Value**	**Unit**	**Test Standard**
Screw speed diameter, 25mm	**150**	RPM	-
Screw speed diameter, 40mm	**100**	RPM	-
Screw speed diameter, 55mm	**70**	RPM	-

Other text information

Pre-drying

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 granul

Longer pre-drying times/storage

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

Film extrusion

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

Melt temperature 180-190 °C

Other extrusion

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

Melt temperature 180-190 °C

Profile extrusion

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

Melt temperature 180-190 °C

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