Celanese
The chemistry inside innovation™

# HOSTAFORM® M10AE

High melt strength
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.

## Rheological properties

| | | | |
|---|---|---|---|
| Melt volume-flow rate | 0.9 | $cm^3$/10min | ISO 1133 |
| Temperature | 190 | °C | |
| Load | 2.16 | kg | |

## Typical mechanical properties

| | | | |
|---|---|---|---|
| Tensile Modulus | 2800 | MPa | ISO 527-1/-2 |
| Yield stress, 50mm/min | 65 | MPa | ISO 527-1/-2 |
| Yield strain, 50mm/min | 9 | % | ISO 527-1/-2 |
| Nominal strain at break | 25 | % | ISO 527-1/-2 |
| Shear Modulus | 889 | MPa | ISO 6721 |
| 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] | $kJ/m^2$ | 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 |

[P]: Partial Break

## Thermal properties

| | | | |
|---|---|---|---|
| Melting temperature, 10°C/min | 167 | °C | ISO 11357-1/-3 |
| Temp. of deflection under load, 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 | 130 | E-6/K | ISO 11359-1/-2 |

## Electrical properties

| | | | |
|---|---|---|---|
| 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 | 28 | kV/mm | IEC 60243-1 |
| Comparative tracking index | PLC 0 | PLC | UL 746A |

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## Other properties

| | | | |
|---|---|---|---|
| Humidity absorption, 2mm | 0.2 | % | Sim. to ISO 62 |
| Water absorption, 2mm | 0.65 | % | Sim. to ISO 62 |
| Density | 1410 | kg/m³ | ISO 1183 |

## Injection

| | | | |
|---|---|---|---|
| Drying Temperature | 100 - 120 | °C | |
| Drying Time, Dehumidified Dryer | 3 - 4 | h | |
| Processing Moisture Content | 0.15 | % | |
| Melt Temperature Optimum | 200 | °C | Internal |
| Screw tangential speed | 0.2 - 0.21 | m/s | |
| Max. mould temperature | 80 - 120 | °C | |
| Back pressure | 4 | MPa | |
| Injection speed | slow-medium | | |

## Characteristics

| | |
|---|---|
| Additives | Release agent |

## Additional information

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

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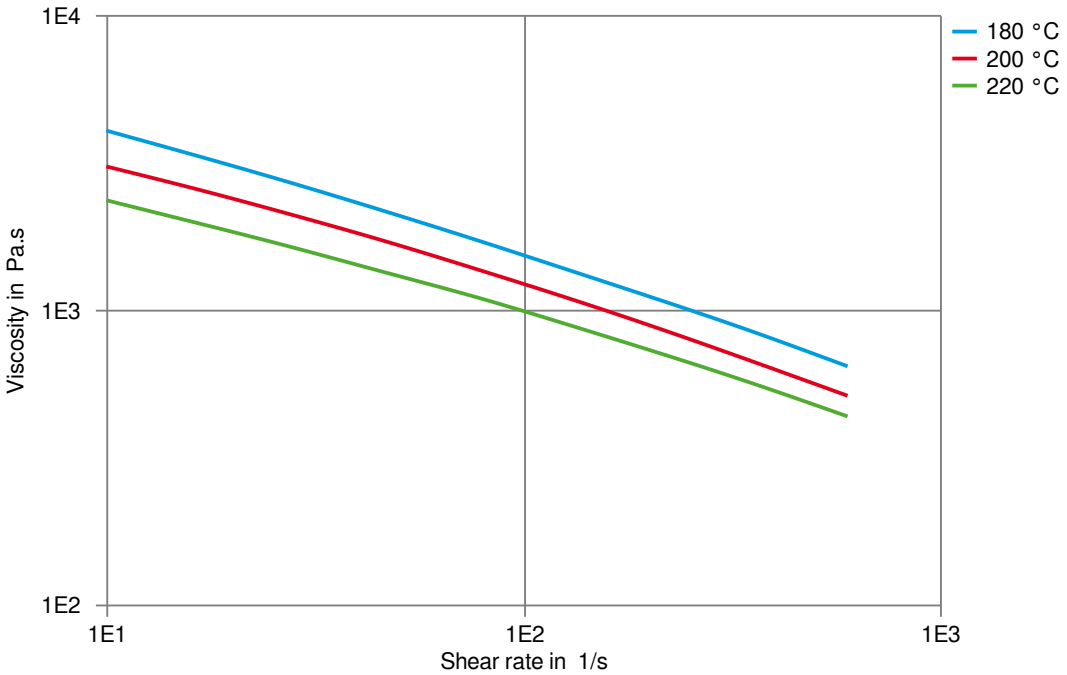
| | |
|---|---|
| Sheet extrusion | Standard extruders with grooved feed zone and short compression screws (minimum 25 D) will fit.<br><br>Melt temperature 180-190 °C |
| Blow molding | Standard extruders with plasticating screws (20 to 25 D) will fit.<br><br>Melt temperature 180-190 °C<br>Mould-surface temperature 60-100 °C |

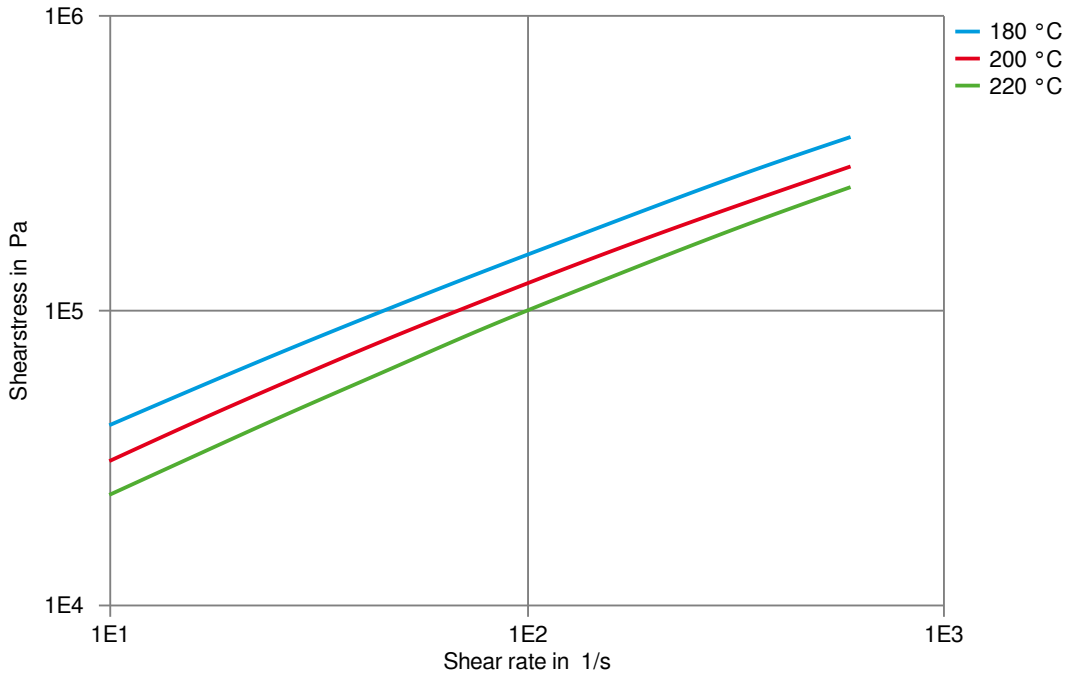
# HOSTAFORM® M10AE

## Viscosity-shear rate



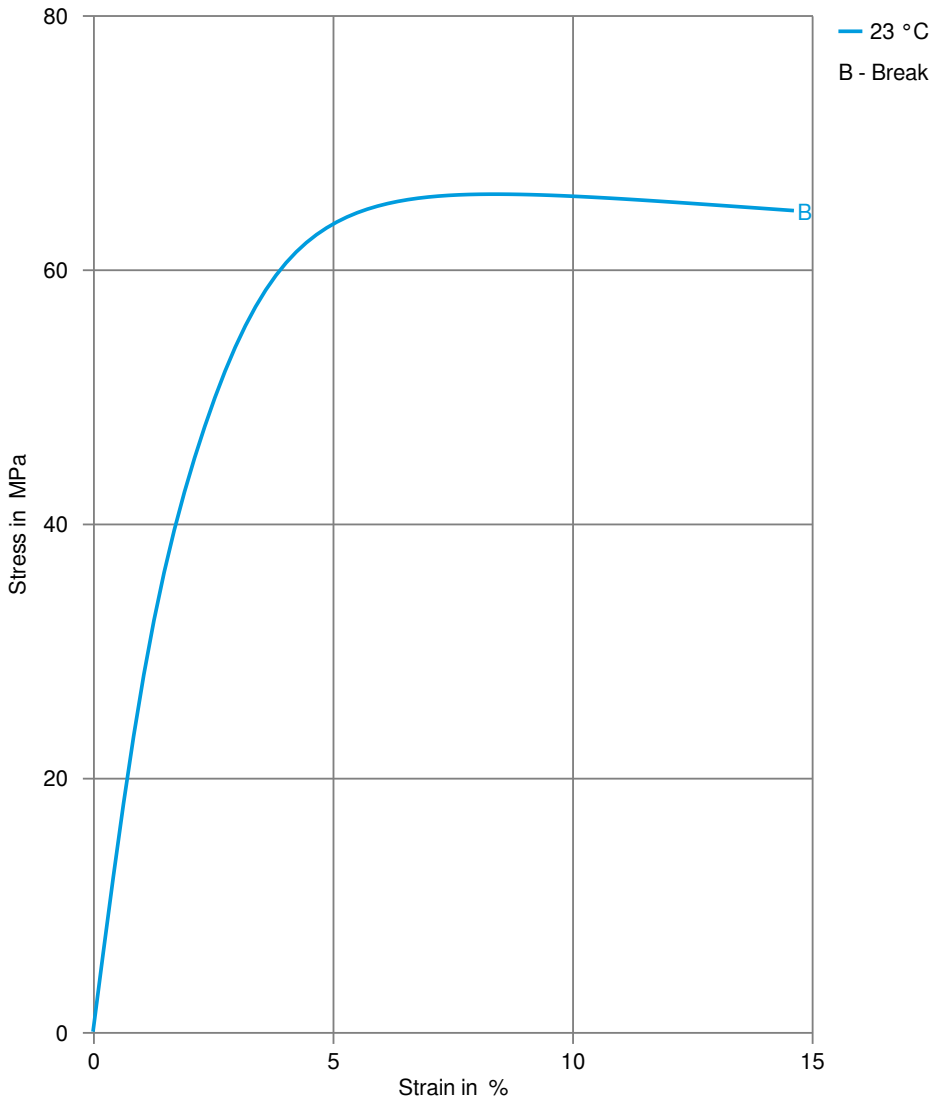
# HOSTAFORM® M10AE

## Shearstress-shear rate



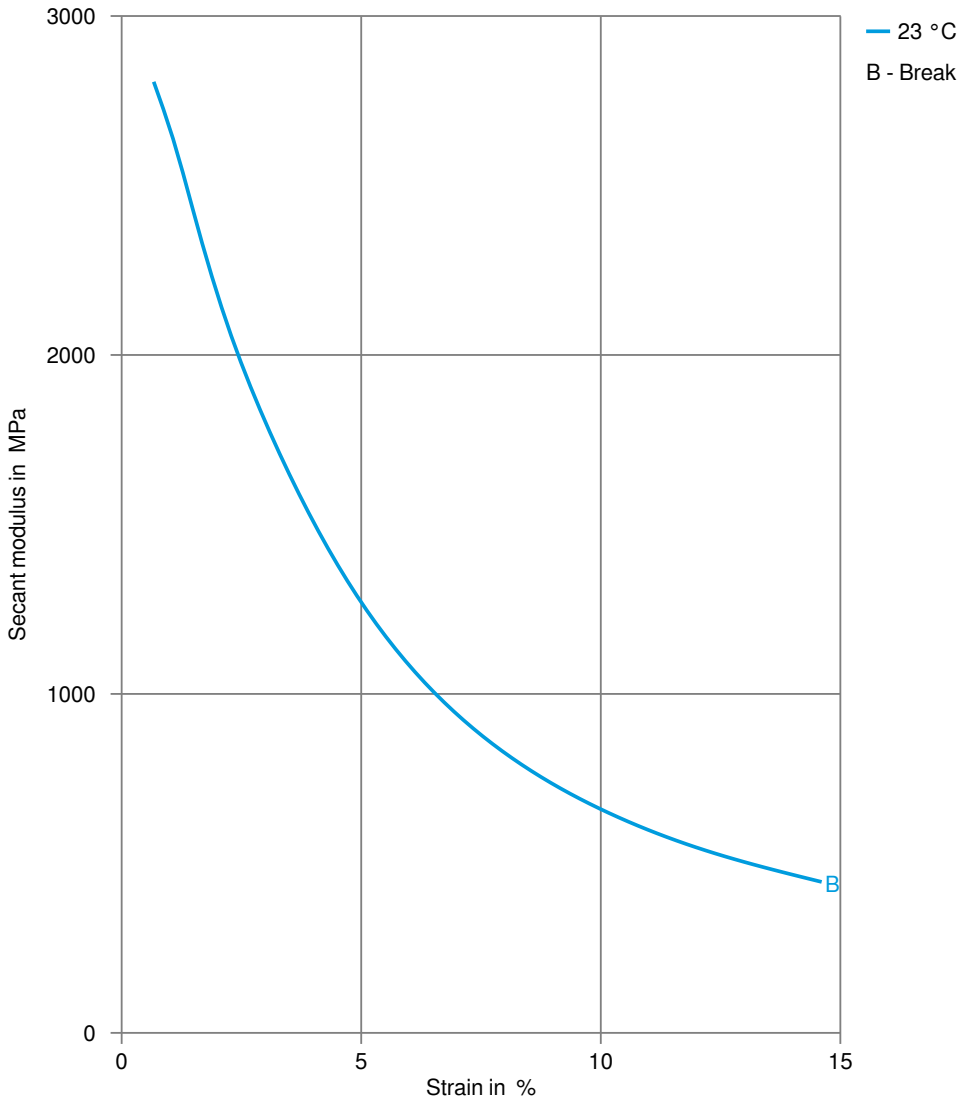
# HOSTAFORM® M10AE

## Stress-strain



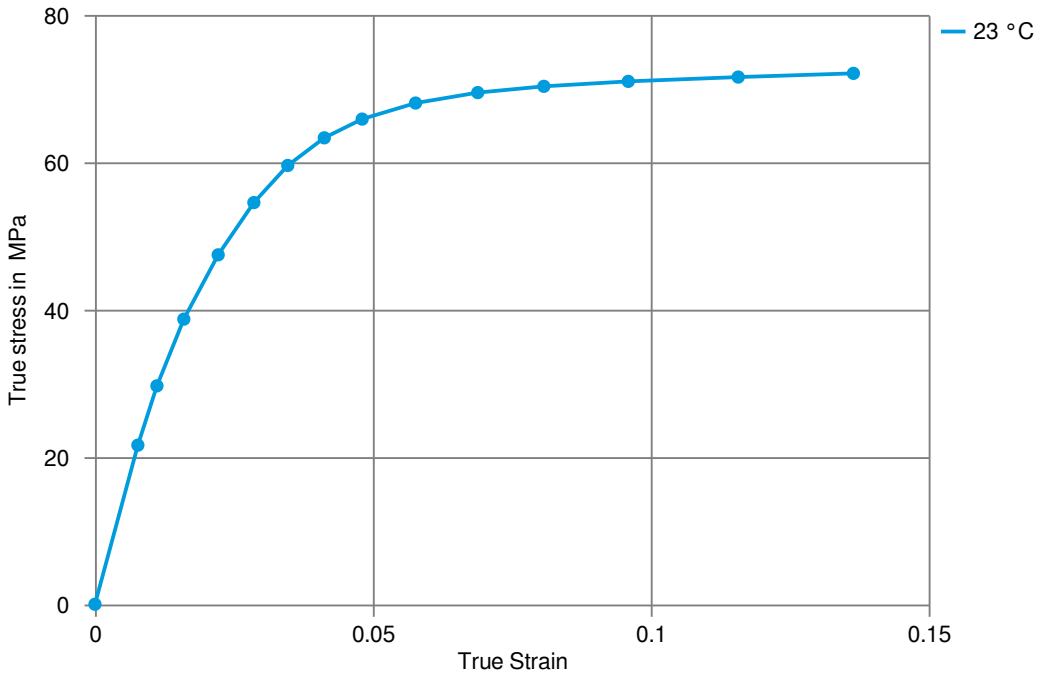
# HOSTAFORM® M10AE

## Secant modulus-strain



# HOSTAFORM® M10AE

## True stress-strain



# HOSTAFORM® M10AE

## Processing Texts

| | |
|---|---|
| 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. |



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