

HOSTAFORM® C 9021 ECO-C 872

HOSTAFORM®

Chemical abbreviation according to ISO 1043-1: POM Molding compound ISO 29988- POM-K, M-GNR, 03-002
 POM copolymer injection molding type with high rigidity, hardness and toughness; 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 < 75 mm/min for a thickness more than 1 mm. Ranges of applications: automotive engineering, precision engineering, electric and electronical industry, domestic appliances. FDA = Food and Drug Administration (USA) FMVSS = Federal Motor Vehicle Safety Standard (USA) UL = Underwriters Laboratories (USA).
 ECO-C: Hostaform® C 9021 ECO-C 872 incorporates circular content derived from captured carbon dioxide emissions in the finished product through mass balance allocation. The product is a drop-in replacement to the standard grade with the same performance and processing properties and contributes to the displacement of virgin fossil fuel resources. The feedstock utilizing captured carbon dioxide emissions is ISCC CFC certified as low carbon intensity methanol.

Product information

Resin Identification	POM	ISO 1043
Part Marking Code	>POM<	ISO 11469

Rheological properties

Melt volume-flow rate	8 cm ³ /10min	ISO 1133
Temperature	190 °C	
Load	2.16 kg	
Moulding shrinkage, parallel	2.0 %	ISO 294-4, 2577
Moulding shrinkage, normal	1.9 ^[1] %	ISO 294-4, 2577
[1]: @ 195 °C		

Typical mechanical properties

Tensile modulus	2850 MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	64 MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min	9 %	ISO 527-1/-2
Nominal strain at break	30 %	ISO 527-1/-2
Flexural modulus	2700 MPa	ISO 178
Flexural strength	89 MPa	ISO 178
Flexural stress at 3.5%	72 MPa	ISO 178
Compressive stress at 1% strain	24 MPa	ISO 604
Tensile creep modulus, 1h	2500 MPa	ISO 899-1
Tensile creep modulus, 1000h	1300 MPa	ISO 899-1
Charpy impact strength, 23 °C	220 ^[P] kJ/m ²	ISO 179/1eU
Charpy impact strength, -30 °C	220 kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23 °C	6.5 kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30 °C	6 kJ/m ²	ISO 179/1eA
Ball indentation hardness, H 358/30	144 MPa	ISO 2039-1
Poisson's ratio	0.399	

[P]: Partial Break

HOSTAFORM® C 9021 ECO-C 872

HOSTAFORM®

Thermal properties

Melting temperature, 10 °C/min	166 °C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	104 °C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	160 °C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	110 E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	110 E-6/K	ISO 11359-1/-2
Thermal conductivity of melt	0.155 W/(m K)	ISO 22007-2

Flammability

Burning Behav. at 1.5mm nom. thickn.	HB class	IEC 60695-11-10
Thickness tested	1.5 mm	IEC 60695-11-10
Burning Behav. at thickness h	HB class	IEC 60695-11-10
Thickness tested	3 mm	IEC 60695-11-10
UL recognition	yes	UL 94

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	35 kV/mm	IEC 60243-1
Comparative tracking index	600	IEC 60112
Relative permittivity, printed circuits and boards, 2.5 GHz	3	IEC 61189-2-721
Relative permittivity, printed circuits and boards, 10 GHz	3.2	IEC 61189-2-721
Dissipation factor, printed circuits and boards, 2.5 GHz	466 E-4	IEC 61189-2-721
Dissipation factor, printed circuits and boards, 10 GHz	144 E-4	IEC 61189-2-721

Physical/Other properties

Humidity absorption, 2mm	0.2 %	Sim. to ISO 62
Water absorption, 2mm	0.65 %	Sim. to ISO 62
Density	1410 kg/m ³	ISO 1183

Injection

Drying Recommended	no
Drying Temperature	100 °C
Drying Time, Dehumidified Dryer	3 - 4 h
Processing Moisture Content	≤0.2 %
Melt Temperature Optimum	200 °C
Min. melt temperature	190 °C
Max. melt temperature	210 °C

HOSTAFORM® C 9021 ECO-C 872

HOSTAFORM®

Screw tangential speed	≤0.3 m/s
Mold Temperature Optimum	100 °C
Min. mould temperature	80 °C
Max. mould temperature	120 °C
Hold pressure range	60 - 120 MPa
Back pressure	4 MPa
Ejection temperature	127 °C

Characteristics

Processing	Injection Moulding, Film Extrusion, Extrusion, Sheet Extrusion, Other Extrusion, Blow Moulding
Delivery form	Pellets
Additives	Release agent
Sustainability	Carbon Capture

Additional information

Injection molding

Preprocessing

General drying is not necessary due to low moisture absorption of the resin.

In case of bad storage conditions (water contact or condensed water) the use of a recirculating air dryer (100 to 120 °C / max. 40 mm layer / 3 to 6 hours) is recommended.

Max. Water content 0,2 %

Processing

Standard injection moulding machines with three phase (15 to 25 D) plasticating screws will fit.

Postprocessing

Conditioning e.g. moisturizing is not necessary.

Film extrusion

Preprocessing

General drying is not necessary due to low moisture absorption of the resin.

In case of bad storage conditions (water contact or condensed water) the use of a recirculating air dryer (100 to 120 °C / max. 40 mm layer / 3 to 6 hours) is recommended.

Max. Water content 0,2 %

HOSTAFORM® C 9021 ECO-C 872

HOSTAFORM®

Processing

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

Melt temperature 180-190 °C

Postprocessing

Conditioning e.g. moisturizing is not necessary.

In case of very thick wall thickness profiles after-annealing it is recommended to reduce internal stress.

Annealing temperature 130-140 °C
Annealing time 10 min/mm thickness

Other extrusion

Preprocessing

General drying is not necessary due to low moisture absorption of the resin.

In case of bad storage conditions (water contact or condensed water) the use of a recirculating air dryer (100 to 120 °C / max. 40 mm layer / 3 to 6 hours) is recommended.

Max. Water content 0,2 %

Processing

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

Melt temperature 180-190 °C

Postprocessing

Conditioning e.g. moisturizing is not necessary.

In case of very thick wall thickness profiles after-annealing it is recommended to reduce internal stress.

Annealing temperature 130-140 °C
Annealing time 10 min/mm thickness

HOSTAFORM® C 9021 ECO-C 872

HOSTAFORM®

Sheet extrusion

HOSTAFORM® C 9021 ECO-C 872

HOSTAFORM®

Preprocessing

General drying is not necessary due to low moisture absorption of the resin.

In case of bad storage conditions (water contact or condensed water) the use of a recirculating air dryer (100 to 120 °C / max. 40 mm layer / 3 to 6 hours) is recommended.

Max. Water content 0,2 %

Processing

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

Melt temperature 180-190 °C

Postprocessing

Conditioning e.g. moisturizing is not necessary.

In case of very thick wall thickness profiles after-annealing it is recommended to reduce internal stress.

Annealing temperature 130-140 °C
Annealing time 10 min/mm thickness

Processing Notes

Pre-Drying

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.

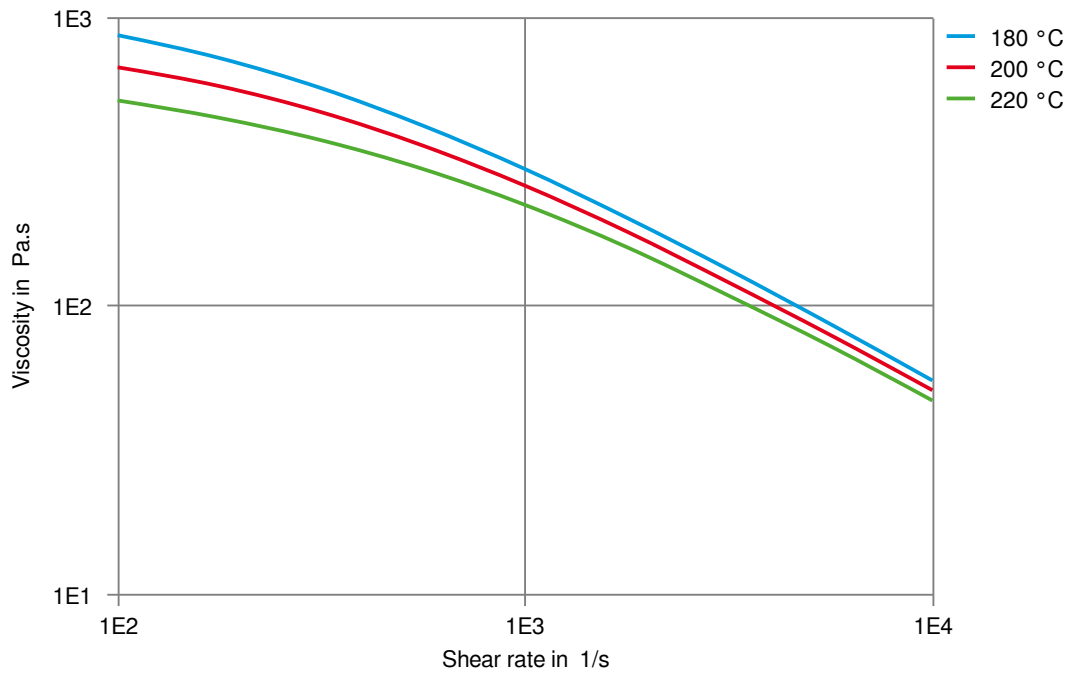
Storage

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

HOSTAFORM® C 9021 ECO-C 872

HOSTAFORM®

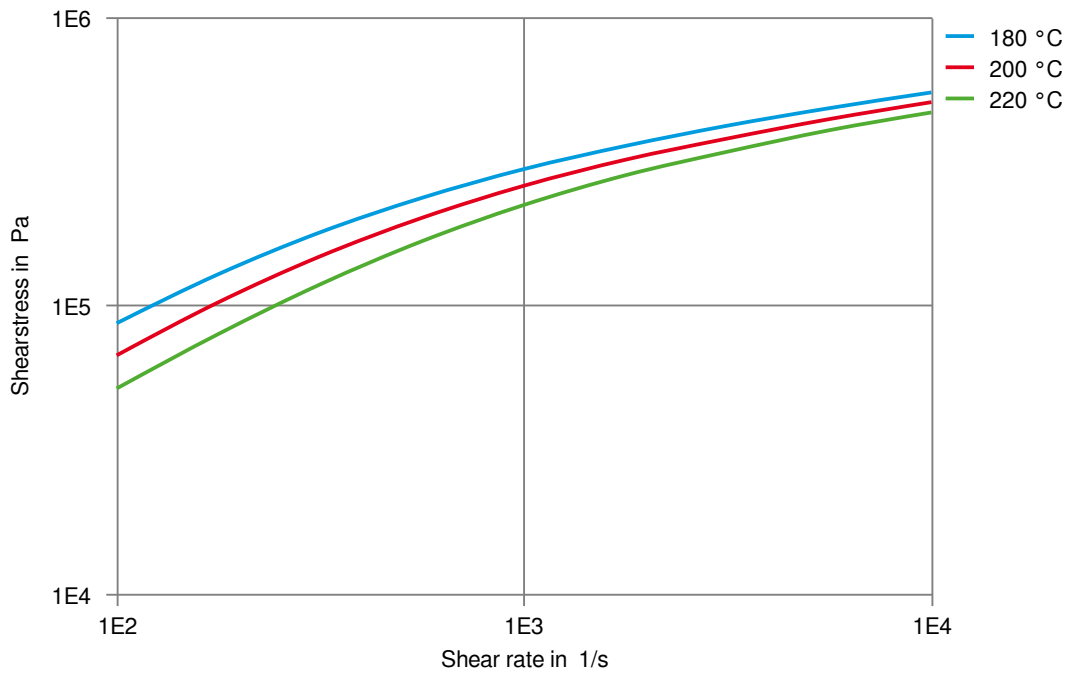
Viscosity-shear rate



HOSTAFORM® C 9021 ECO-C 872

HOSTAFORM®

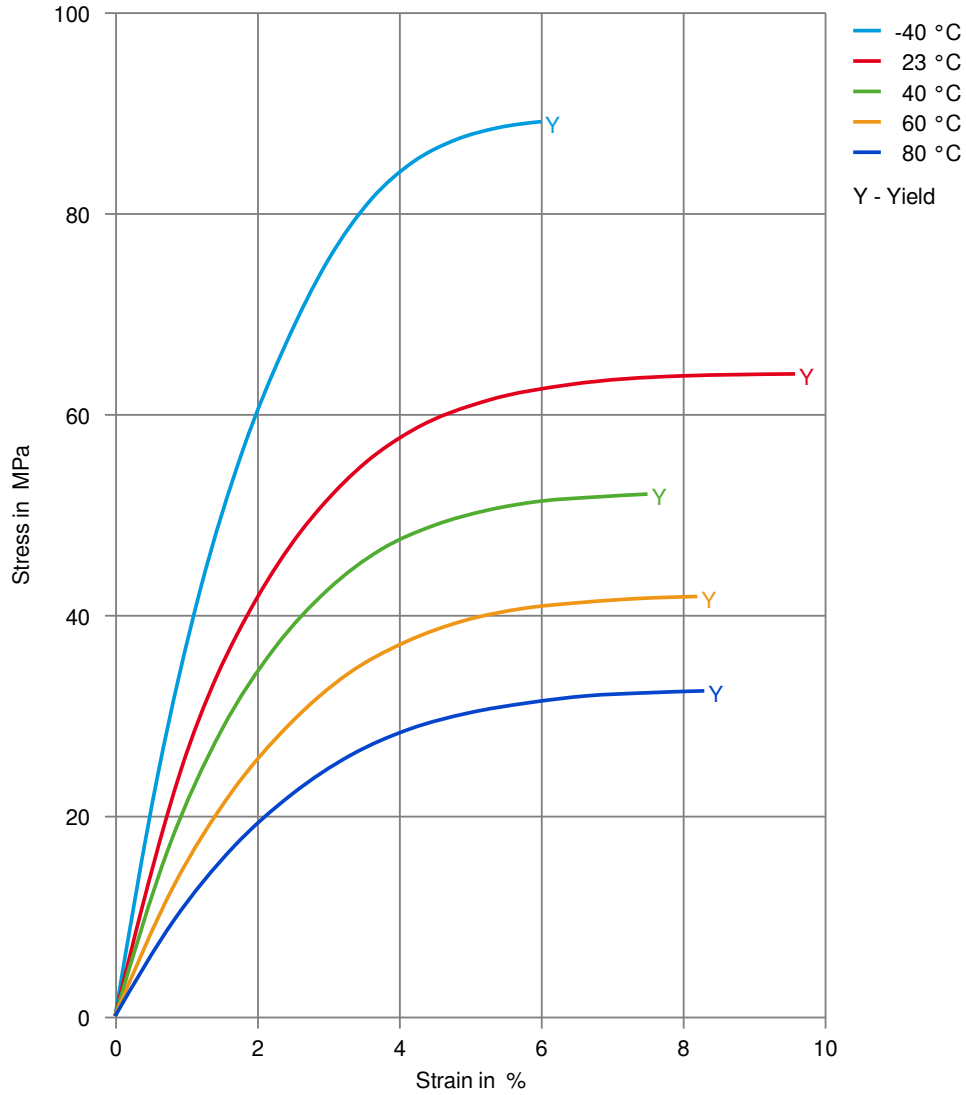
Shearstress-shear rate



HOSTAFORM® C 9021 ECO-C 872

HOSTAFORM®

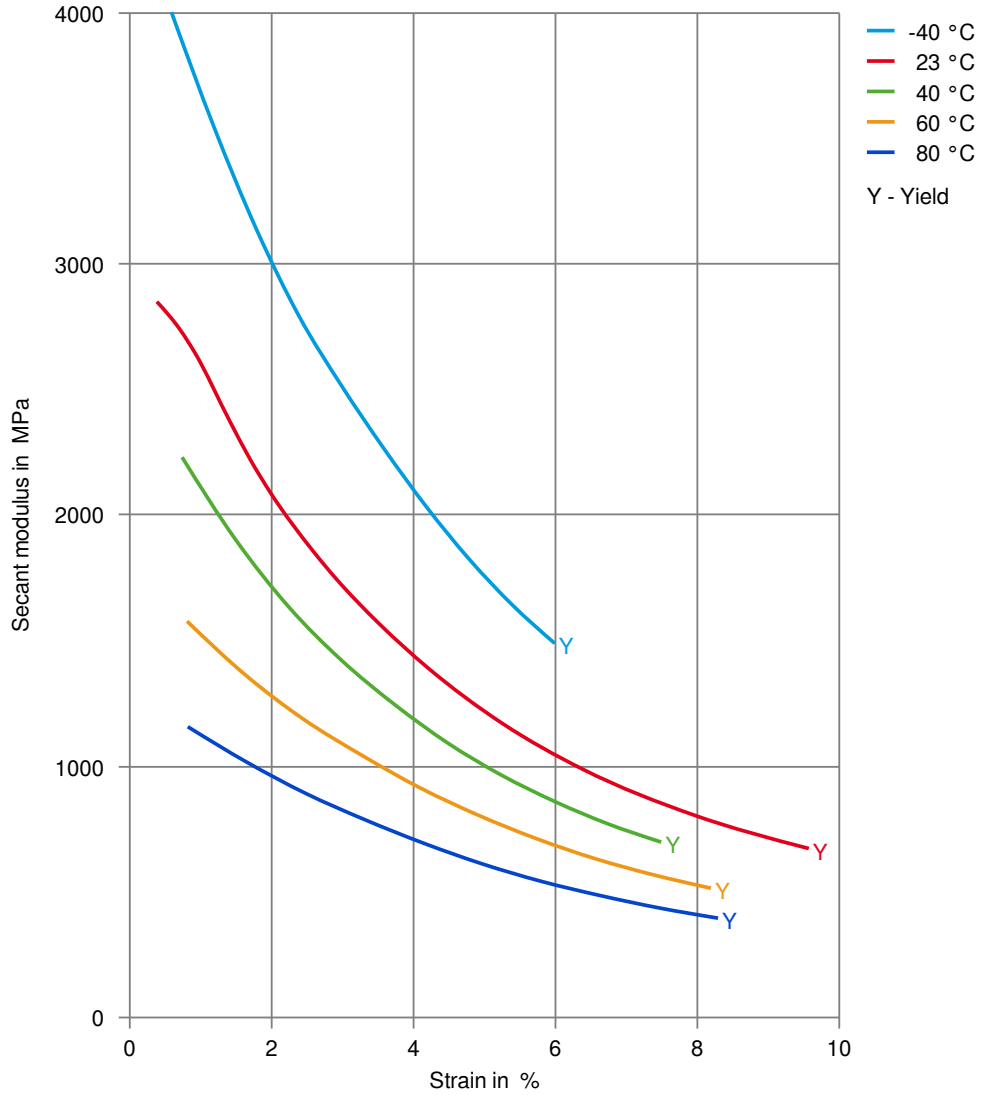
Stress-strain



HOSTAFORM® C 9021 ECO-C 872

HOSTAFORM®

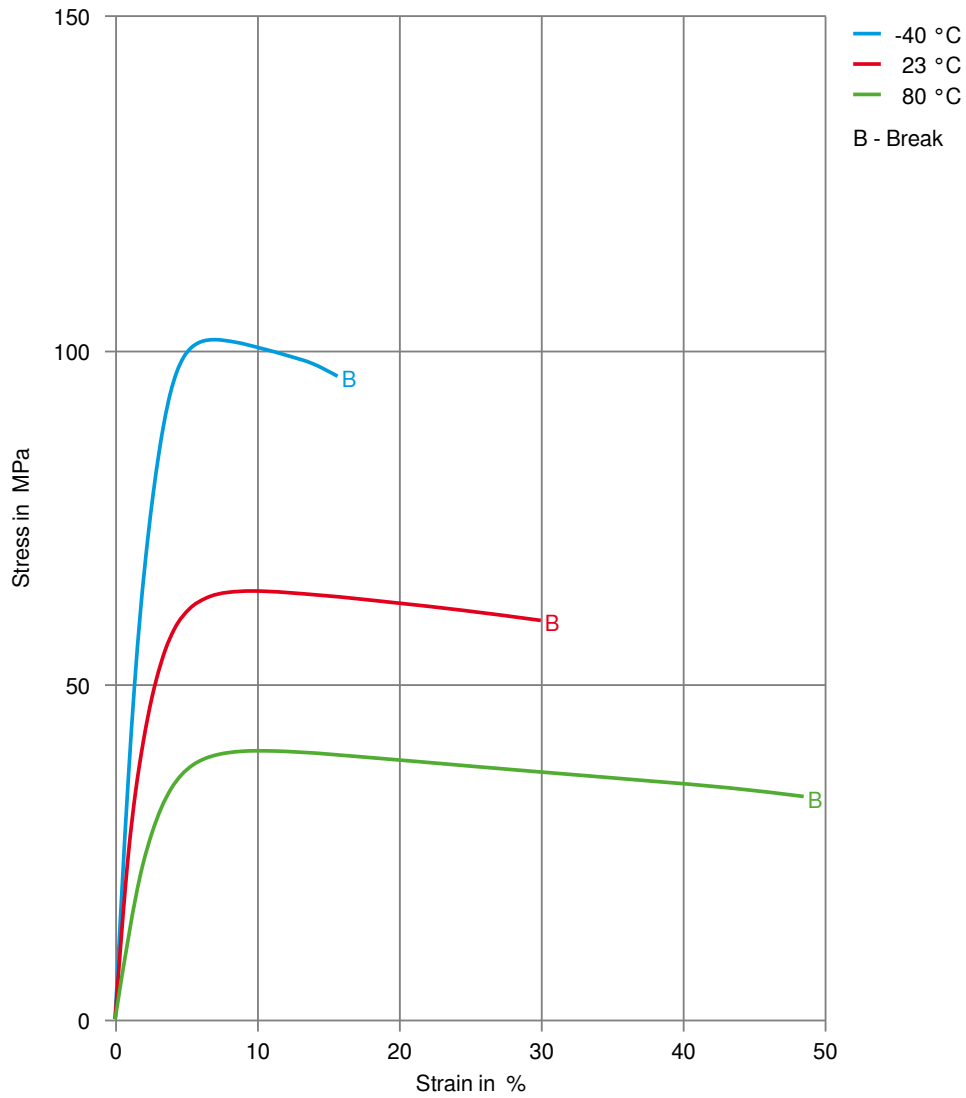
Secant modulus-strain



HOSTAFORM® C 9021 ECO-C 872

HOSTAFORM®

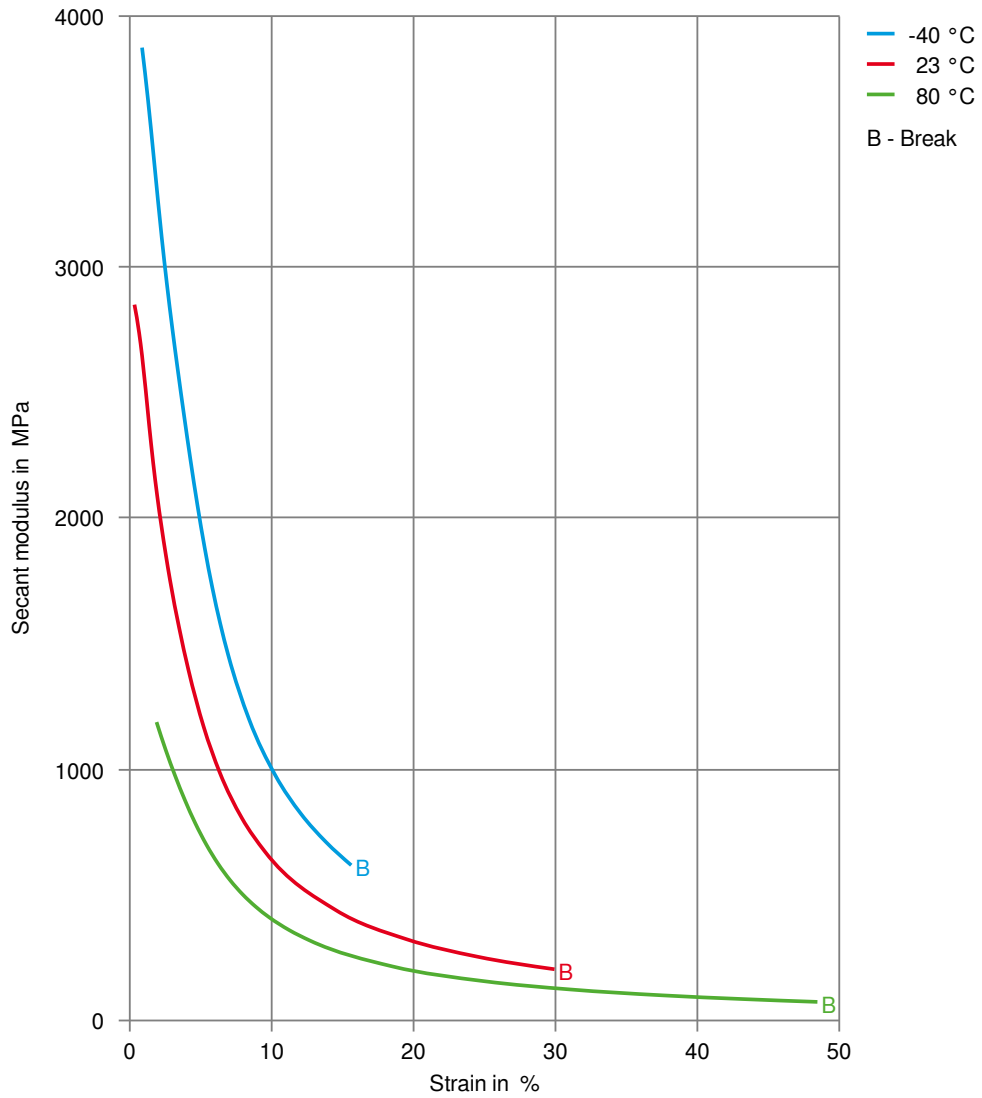
Stress-strain, 50mm/min



HOSTAFORM® C 9021 ECO-C 872

HOSTAFORM®

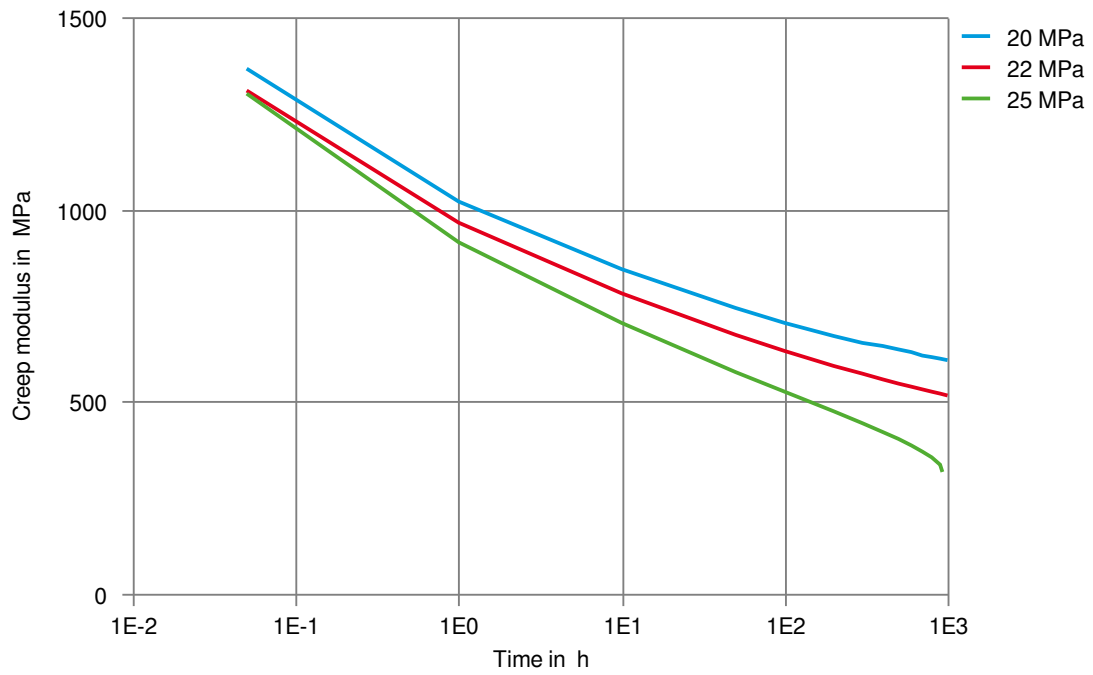
Secant modulus-strain, 50mm/min



HOSTAFORM® C 9021 ECO-C 872

HOSTAFORM®

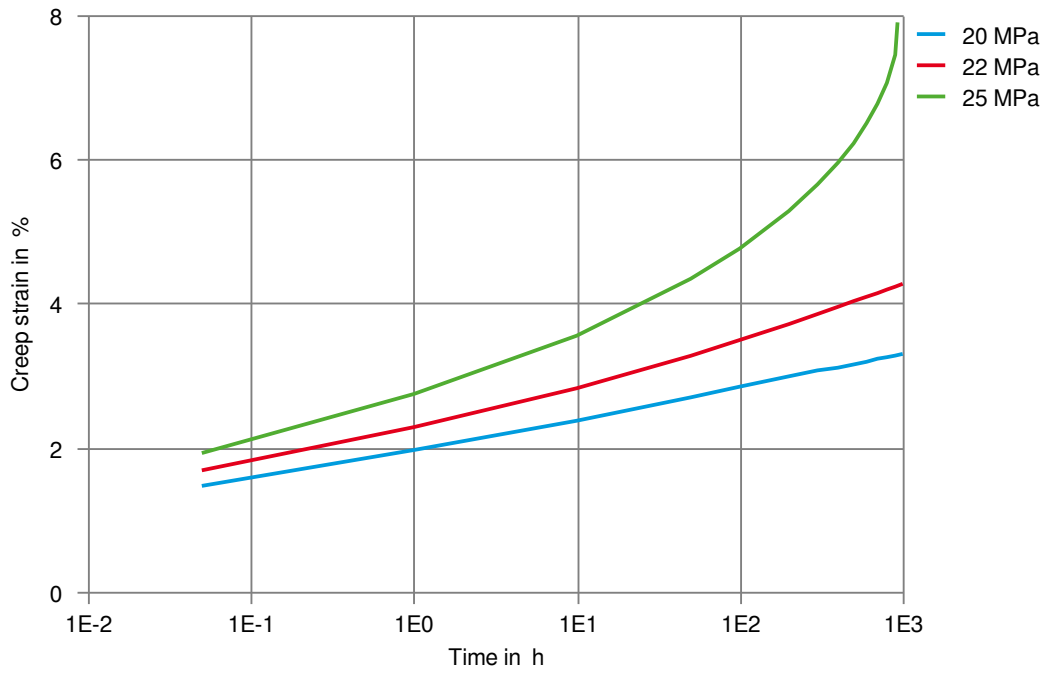
Creep modulus-time 60°C



HOSTAFORM® C 9021 ECO-C 872

HOSTAFORM®

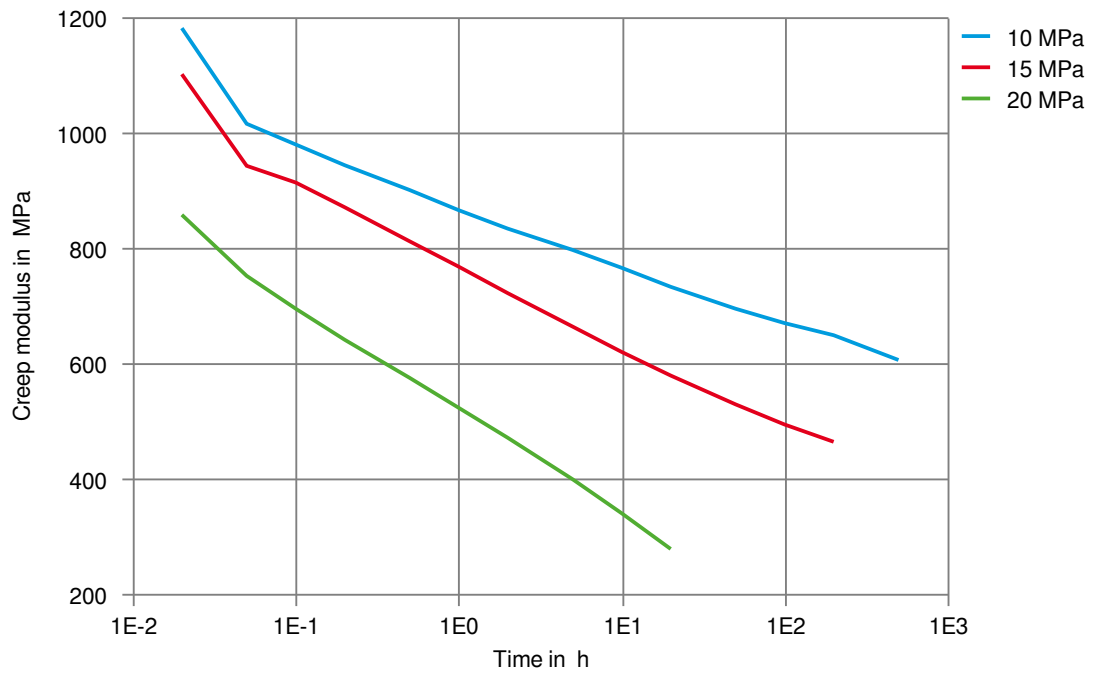
Creep strain-time 60°C



HOSTAFORM® C 9021 ECO-C 872

HOSTAFORM®

Creep modulus-time 90°C



HOSTAFORM® C 9021 ECO-C 872

HOSTAFORM®

Creep strain-time 90°C

