Celanese
The chemistry inside innovation™

# HOSTAFORM® C 9021 ECO-B

## 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-B: Hostaform ECO-B is a POM-Copolymer with the same properties and performance as standard grades but produced with sustainability in mind. Using a mass-balance approach, biogenic feedstocks are used to offset the use of fossil-based raw materials and decrease greenhouse gas emissions. The process is audited and certified according to the ISCC Plus mass balance approach.

## 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 | |
| Molding shrinkage, parallel | 2.0 | % | ISO 294-4, 2577 |
| Molding shrinkage, normal | 1.9 | % | ISO 294-4, 2577 |

## 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 | $kJ/m^2$ | 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 | | |

## 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 |

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| | | | |
|---|---|---|---|
| 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 |

### Physical/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 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 |
| Max. screw tangential speed | ≤0.3 | m/s |
| Mold Temperature Optimum | 100 | °C |
| Min. mold temperature | 80 | °C |
| Max. mold temperature | 120 | °C |
| Hold pressure range | 60 - 120 | MPa |
| Hold Pressure Time<br>(h is the max. wall thickness of the part in mm) | 2h²-3 | s |
| Back pressure | 4 | MPa |
| Ejection temperature | 140 | °C |

### Extrusion

| | | |
|---|---|---|
| Drying Temperature | 90 - 110 | °C |
| Drying Time, Dehumidified Dryer | 3 - 4 | h |
| Processing Moisture Content | ≤0.2 | % |
| Melt Temperature Optimum | 190 | °C |

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| | |
|---|---|
| Melt Temperature Range | 180 - 200 °C |

## Characteristics

| | |
|---|---|
| Processing | Injection Molding, Film Extrusion, Extrusion, Sheet Extrusion, Other Extrusion, Blow Molding |
| Additives | Release agent |
| Sustainability | Bio-Content |

## 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 %

### Processing

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

Melt temperature 180-190 °C

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## 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

Sheet 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

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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.

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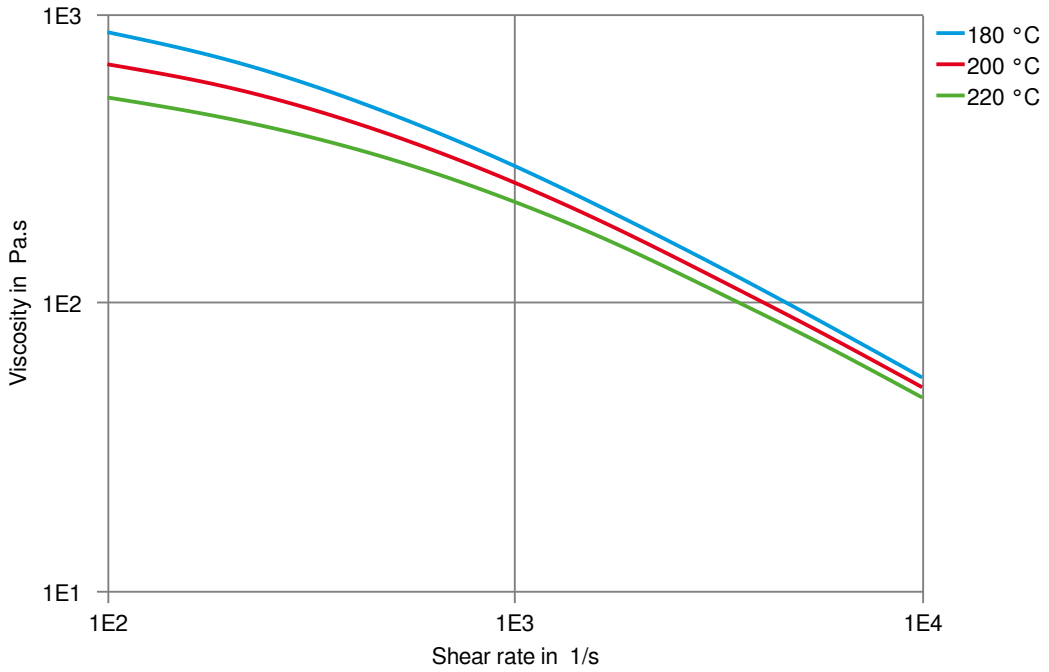
## Viscosity-shear rate



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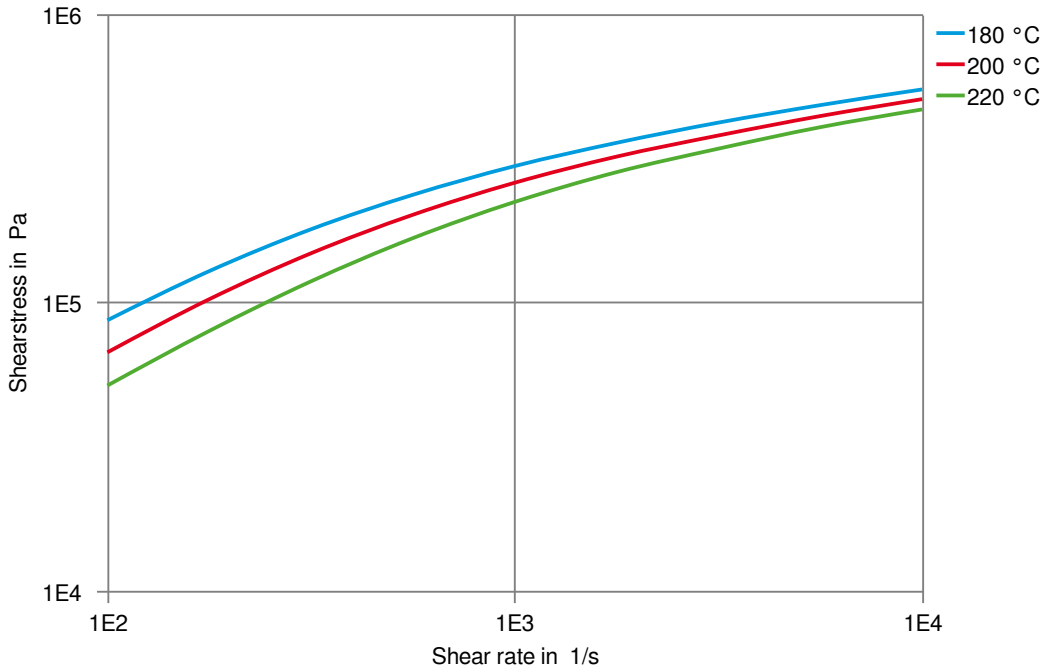
## Shearstress-shear rate



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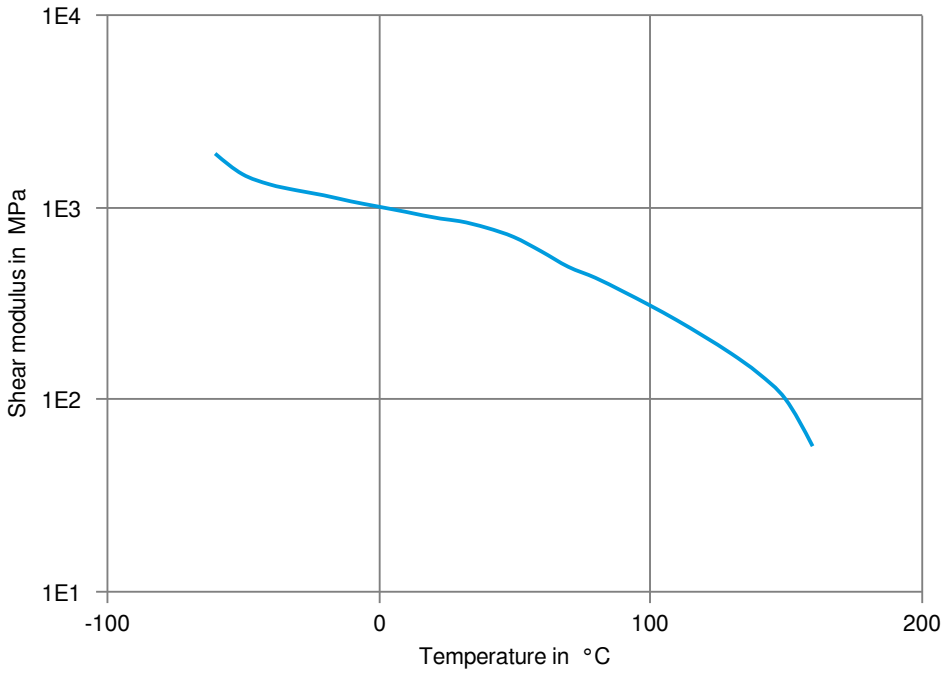
## Dynamic Shear modulus-temperature



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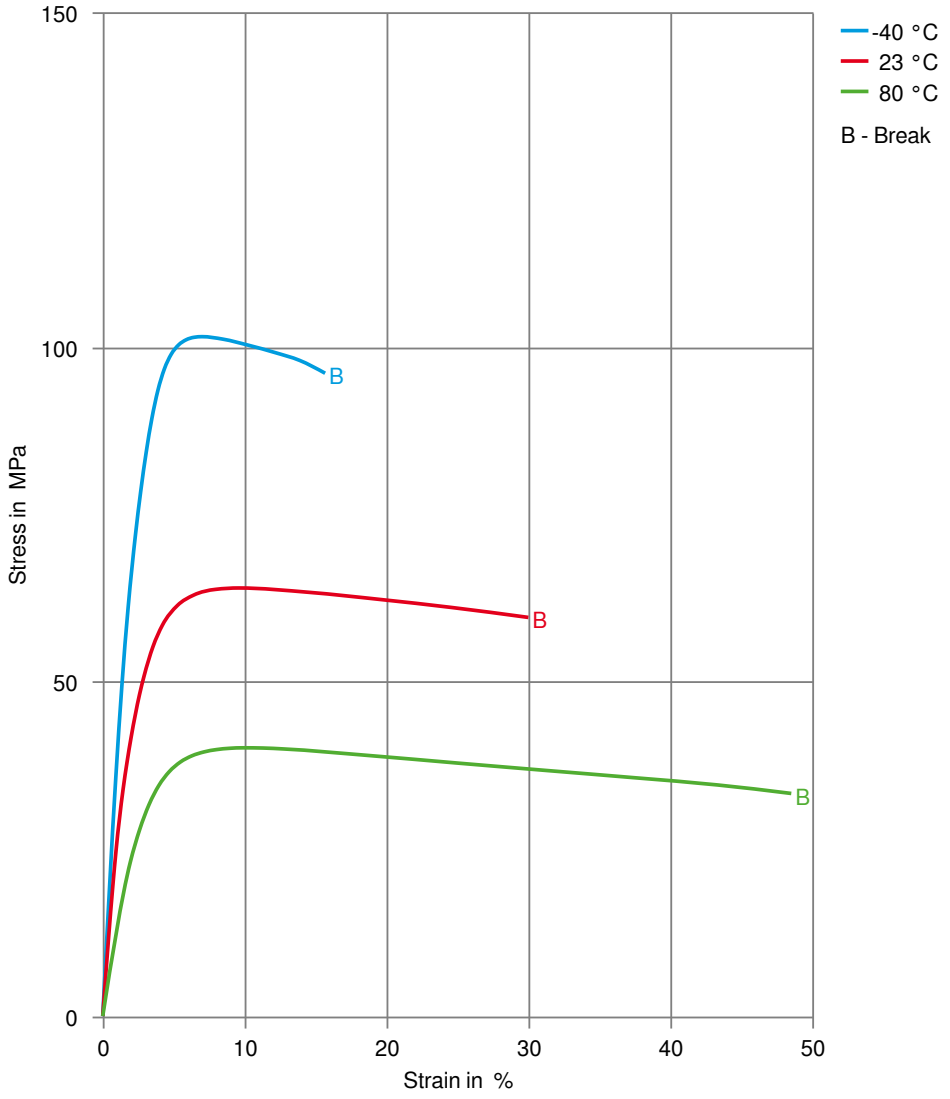
## Stress-strain



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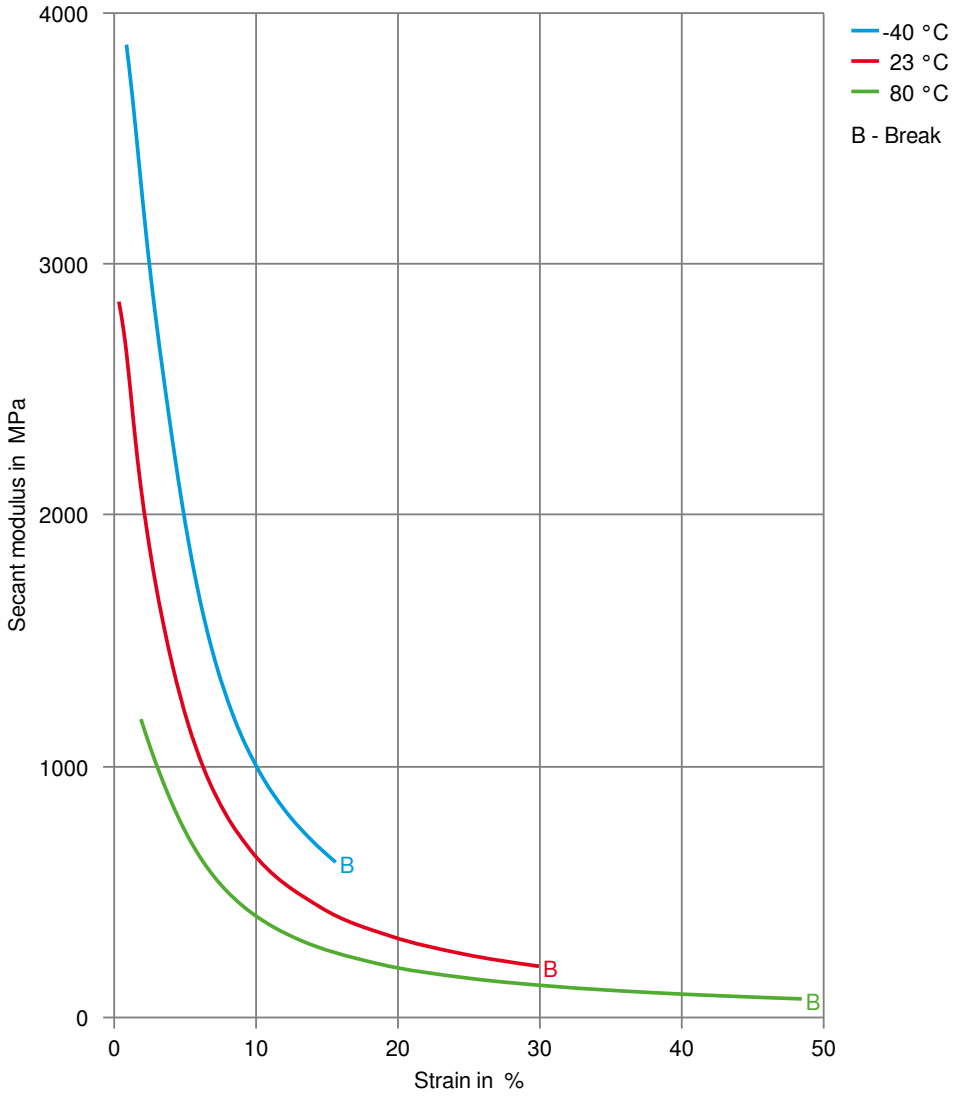
## Secant modulus-strain



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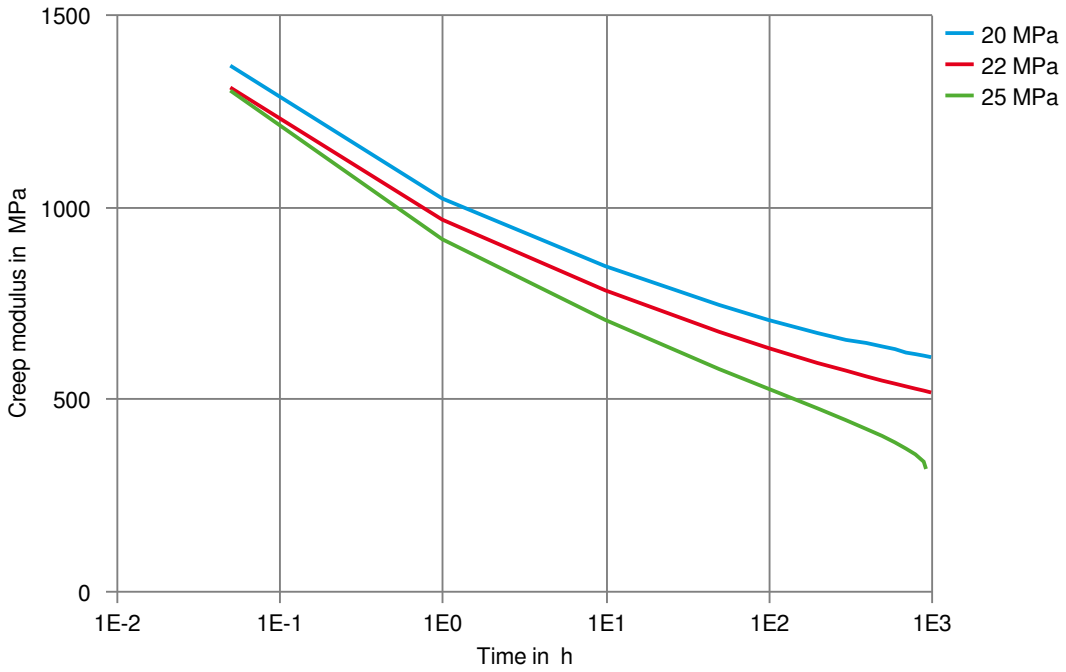
## Creep modulus-time 60 °C



# HOSTAFORM® C 9021 ECO-B

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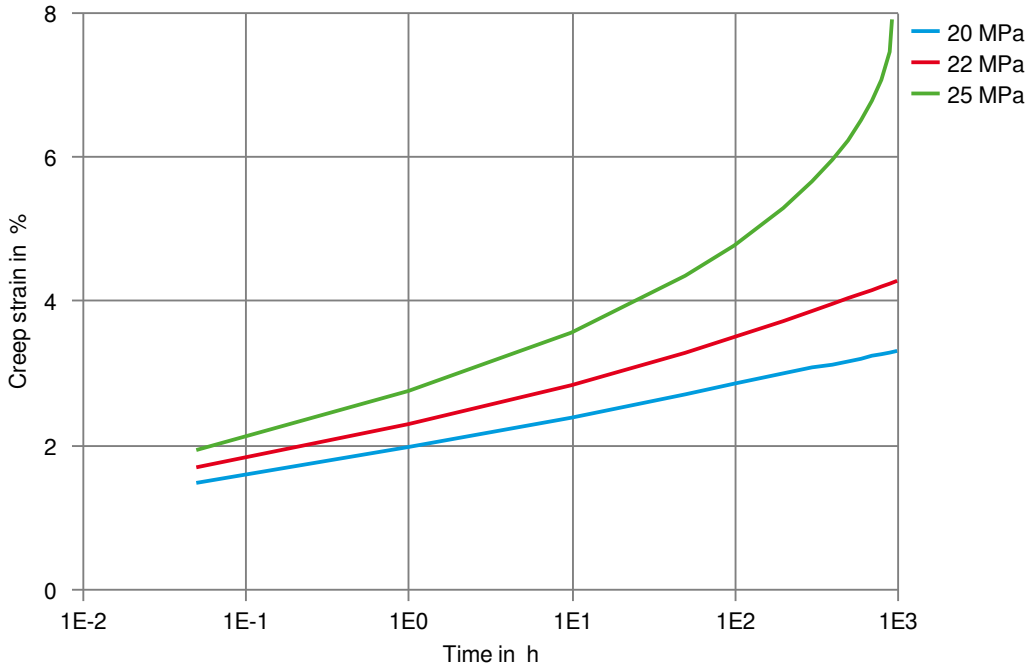
## Creep strain-time 60 °C



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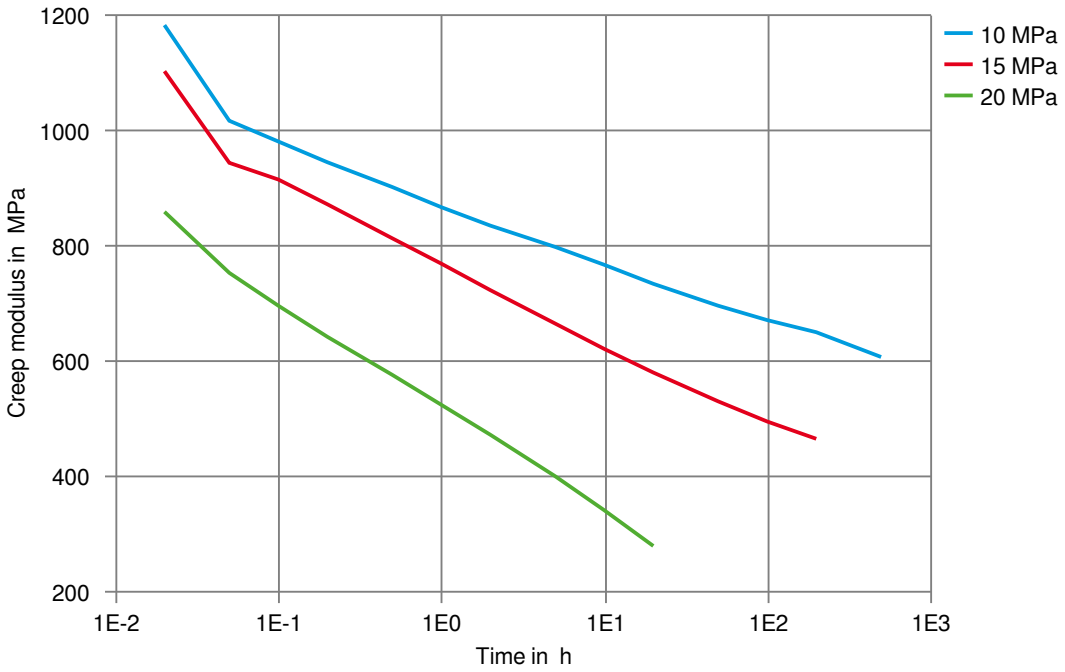
## Creep modulus-time 90 °C



# HOSTAFORM® C 9021 ECO-B

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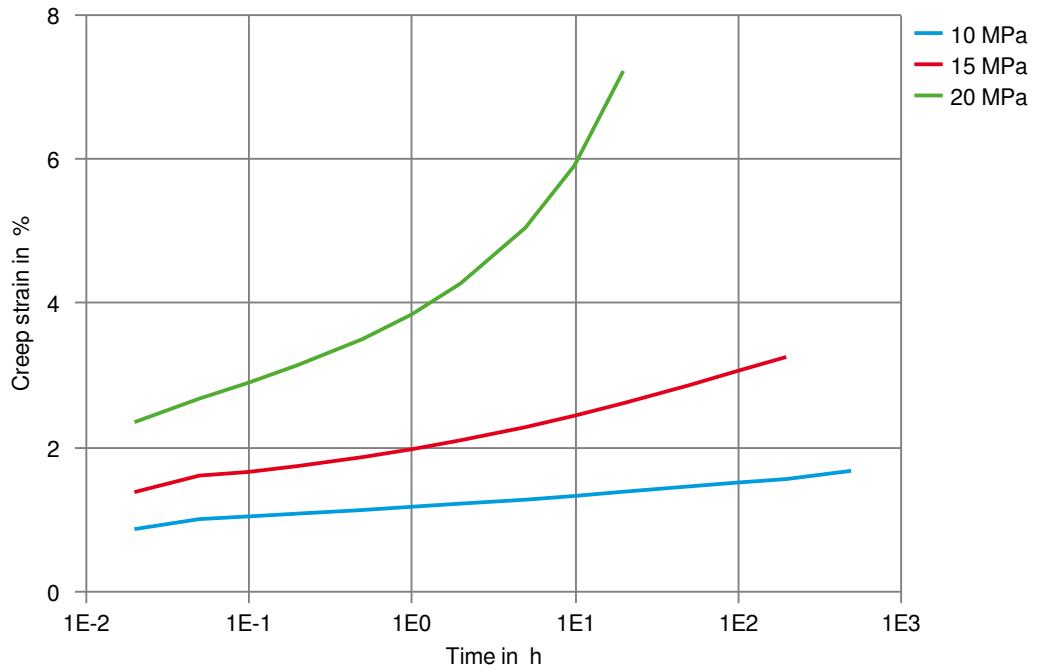
## Creep strain-time 90 °C






Revised: 2025-12-22 Source: Celanese Materials Database

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