Celanese
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HOSTAFORM® MT®12U03 ECO-B

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Hostaform® MT®12U03 ECO-B is a moderately high flow grade for faster cycling and thin walled injection molding with improved stiffness and hardness compared to Hostaform® MT®12U01.

Hostaform® MT®12U03 ECO-B is a special grade developed for medical industry applications and complies with:

- CFR 21 (177.2470) of the Food and Drug Administration (FDA) and is listed in the Drug Master File (DMF 11559) and the Device Master File (MAF 1079)
- the corresponding EU and national registry regulatory requirements
- biocompatibility in tests corresponding to USP < 88> Class VI/ISO 10993
- low residual monomers
- no animal-derived constituents

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	12	cm^3/10min	ISO 1133
Temperature	190	°C	
Load	2.16	kg	
Moulding shrinkage, parallel	2.0	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.8	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	3100	MPa	ISO 527-1/-2
Tensile stress at yield, 50mm/min	70	MPa	ISO 527-1/-2
Tensile strain at yield, 50mm/min	8	%	ISO 527-1/-2
Nominal strain at break	28	%	ISO 527-1/-2
Flexural modulus	3000	MPa	ISO 178
Tensile creep modulus, 1h	2750	MPa	ISO 899-1
Tensile creep modulus, 1000h	1450	MPa	ISO 899-1
Charpy impact strength, 23°C	200	kJ/m^2	ISO 179/1eU
Charpy impact strength, -30°C	200	kJ/m^2	ISO 179/1eU
Charpy notched impact strength, 23°C	6	kJ/m^2	ISO 179/1eA
Charpy notched impact strength, -30°C	6	kJ/m^2	ISO 179/1eA
Izod notched impact strength, 23°C	5.5	kJ/m^2	ISO 180/1A
Ball indentation hardness, H 358/30	156	MPa	ISO 2039-1
Poisson's ratio	0.37[C]		

[C]: Calculated

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Thermal properties

Melting temperature, 10 °C/min	170	°C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	107	°C	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	120	E-6/K	ISO 11359-1/-2

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
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

Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Additives	Release agent
Sustainability	Bio-Content

Additional information

Processing Notes

Pre-Drying

Drying is not normally required. If material has come in contact with moisture through improper storage or handling, drying may be necessary to prevent splay and odor problems.

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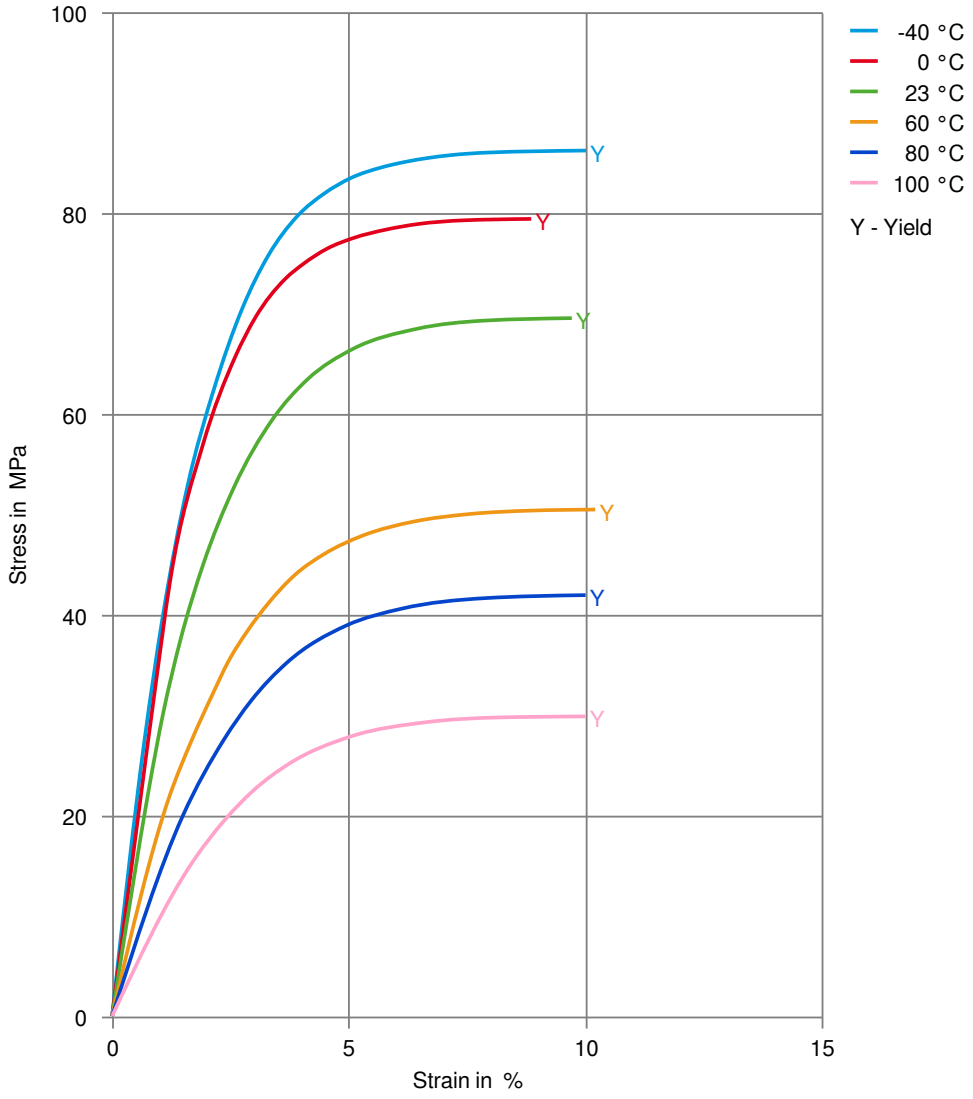
Stress-strain



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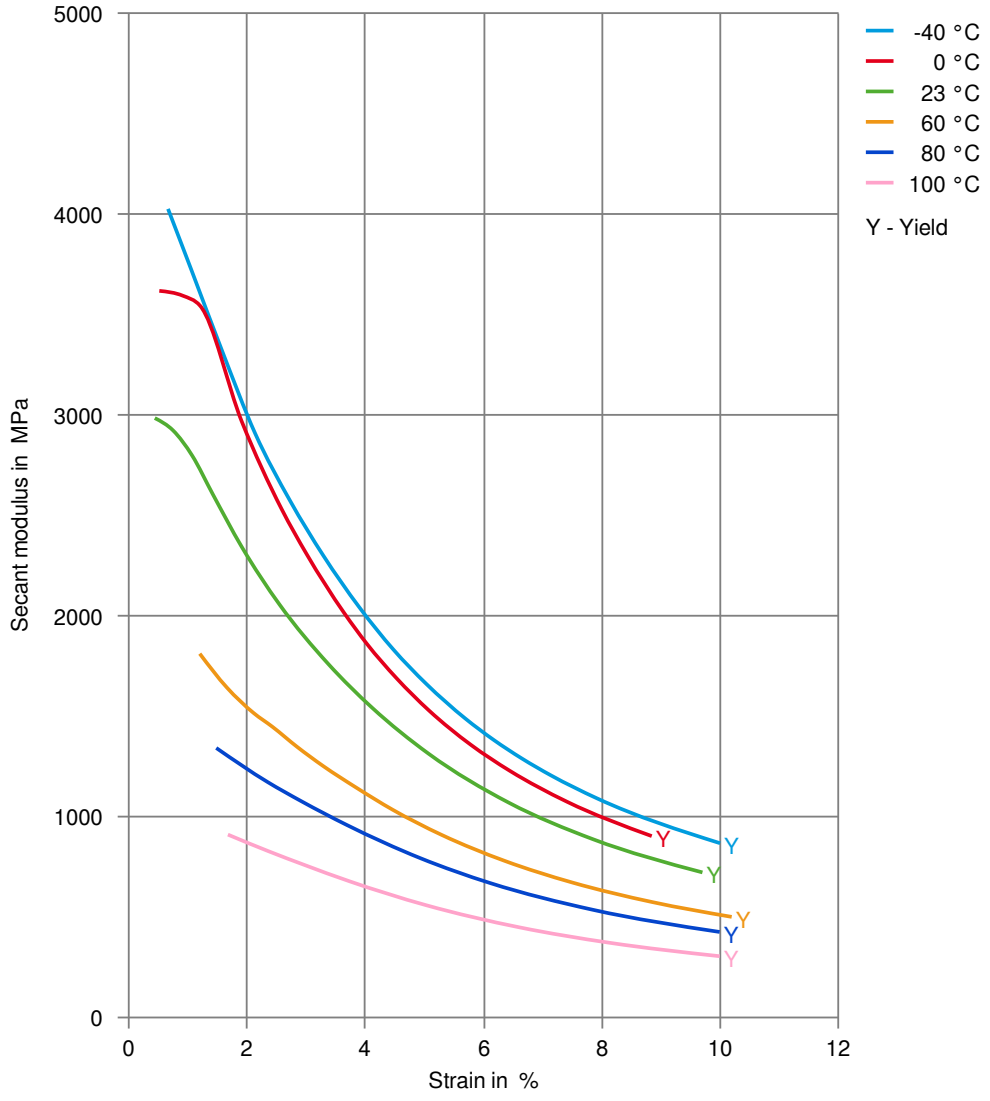
Secant modulus-strain



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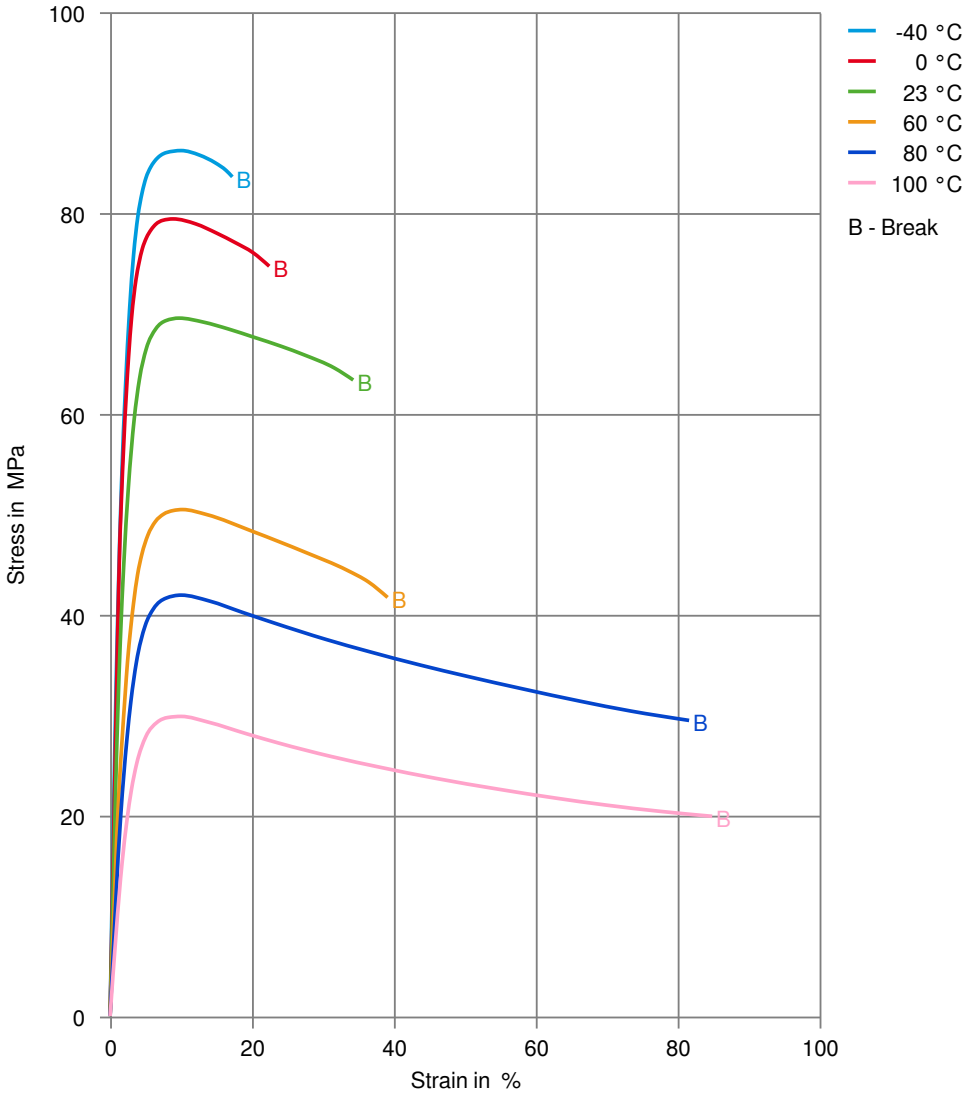
Stress-strain, 50mm/min



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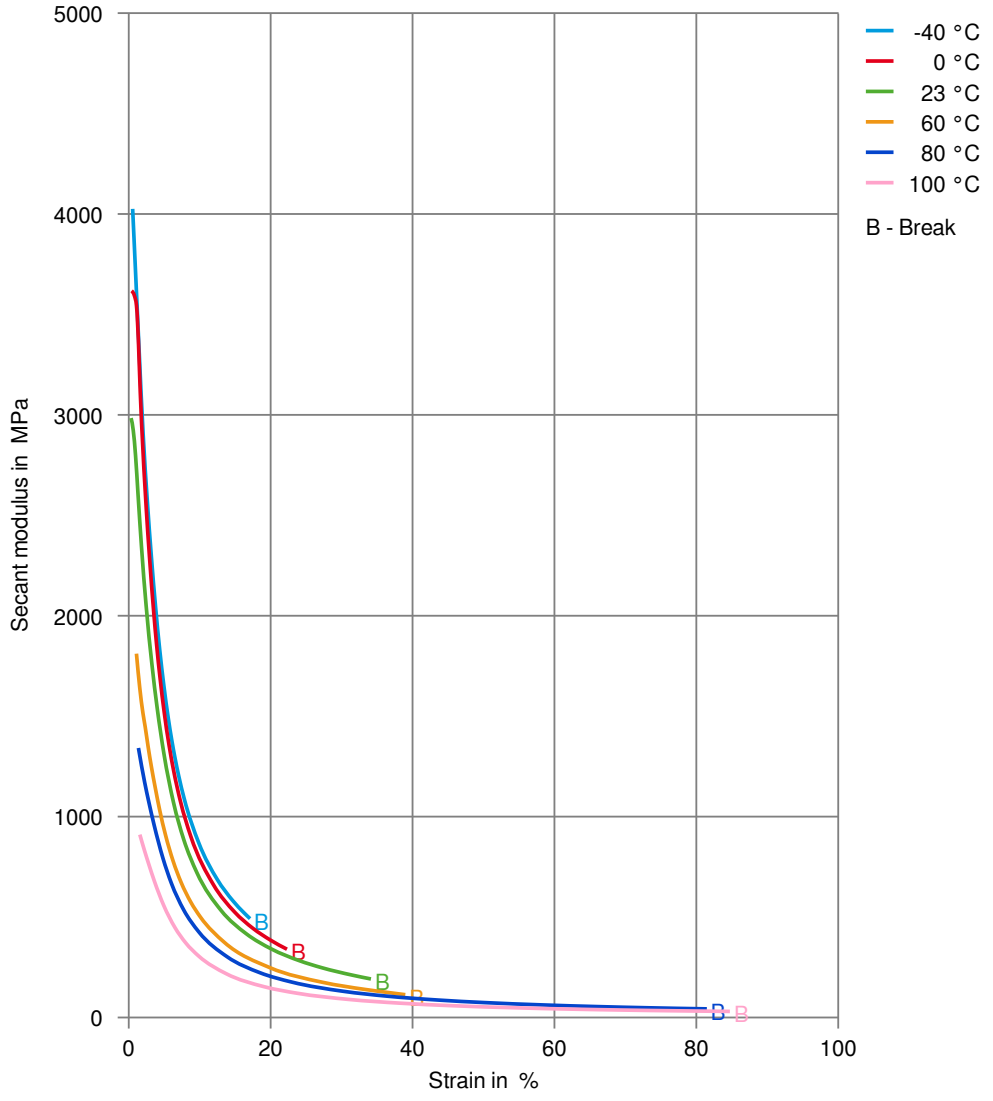
Secant modulus-strain, 50mm/min



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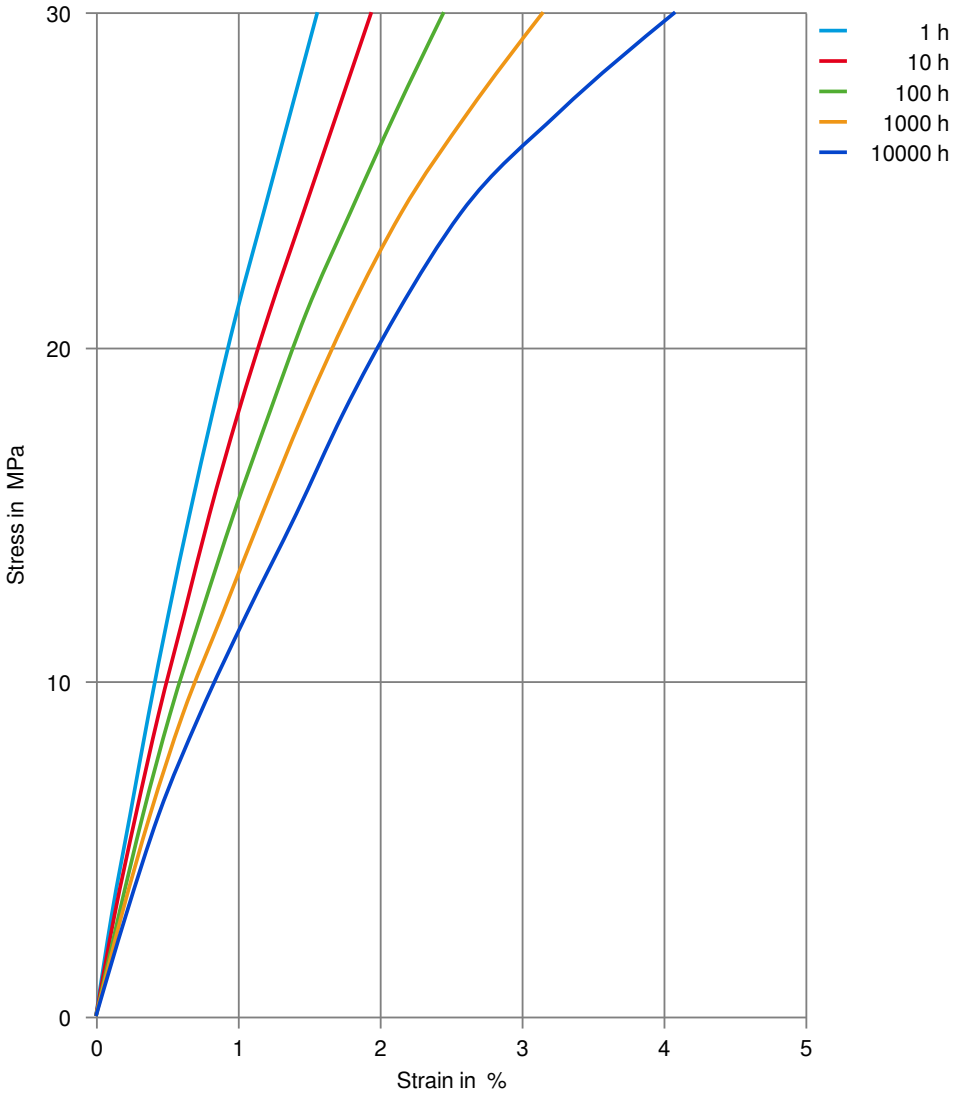
Stress-strain (isochronous) 23 °C



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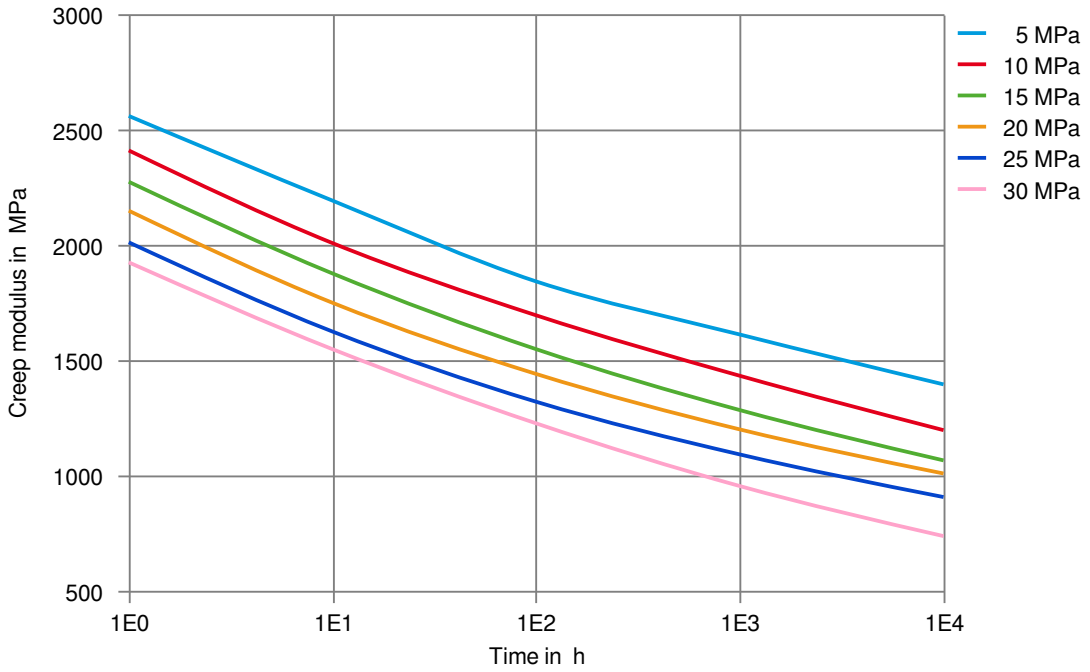
Creep modulus-time 23 °C



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