HOSTAFORM® MT®12U03

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Hostaform® MT®12U03 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 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

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	374	°F	
Load	4.76	lb	
Molding shrinkage, parallel	2.0	%	ISO 294-4, 2577
Molding shrinkage, normal	1.8	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	450000	psi	ISO 527-1/-2
Tensile stress at yield, 50mm/min	10000	psi	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	435000	psi	ISO 178
Tensile creep modulus, 1h	399000	psi	ISO 899-1
Tensile creep modulus, 1000h	210000	psi	ISO 899-1
Charpy impact strength, 23°C	95.1	$ftlb/in^2$	ISO 179/1eU
Charpy impact strength, -30°C	95.1	$ftlb/in^2$	ISO 179/1eU
Charpy notched impact strength, 23°C	2.85	$ftlb/in^2$	ISO 179/1eA
Charpy notched impact strength, -30°C	2.85	$ftlb/in^2$	ISO 179/1eA
Izod notched impact strength, 23°C	2.62	$ftlb/in^2$	ISO 180/1A
Ball indentation hardness, H 358/30	22600	psi	ISO 2039-1

Thermal properties

Melting temperature, 10°C/min	338	°F	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	225	°F	ISO 75-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	0.67	E-4/°F	ISO 11359-1/-2

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Physical/Other properties

Humidity absorption, 2mm	0.2	%	Sim. to ISO 62
Water absorption, 2mm	0.65	%	Sim. to ISO 62
Density	0.0509	lb/in³	ISO 1183

Injection

Drying Recommended	no	
Drying Temperature	212	°F
Drying Time, Dehumidified Dryer	3 - 4	h
Processing Moisture Content	≤0.2	%
Melt Temperature Optimum	392	°F
Min. melt temperature	374	°F
Max. melt temperature	410	°F
Max. screw tangential speed	≤0.3	m/s
Mold Temperature Optimum	212	°F
Min. mold temperature	176	°F
Max. mold temperature	248	°F
Hold pressure range	8700 - 17400	psi
Hold Pressure Time (h is the max. wall thickness of the part in mm)	2h²-3	s
Back pressure	580	psi
Ejection temperature	277	°F

Characteristics

Processing	Injection Molding

Additional information

Processing Notes

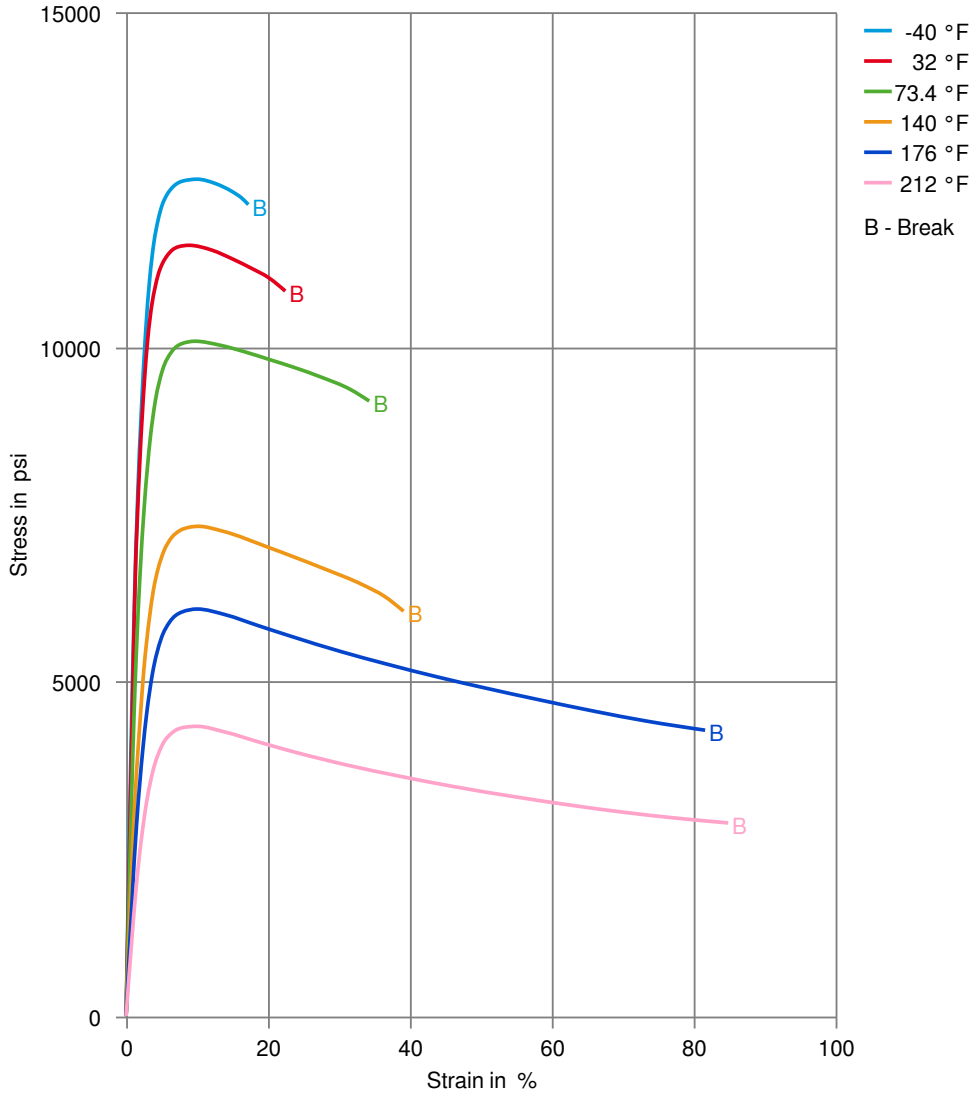
Pre-Drying

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

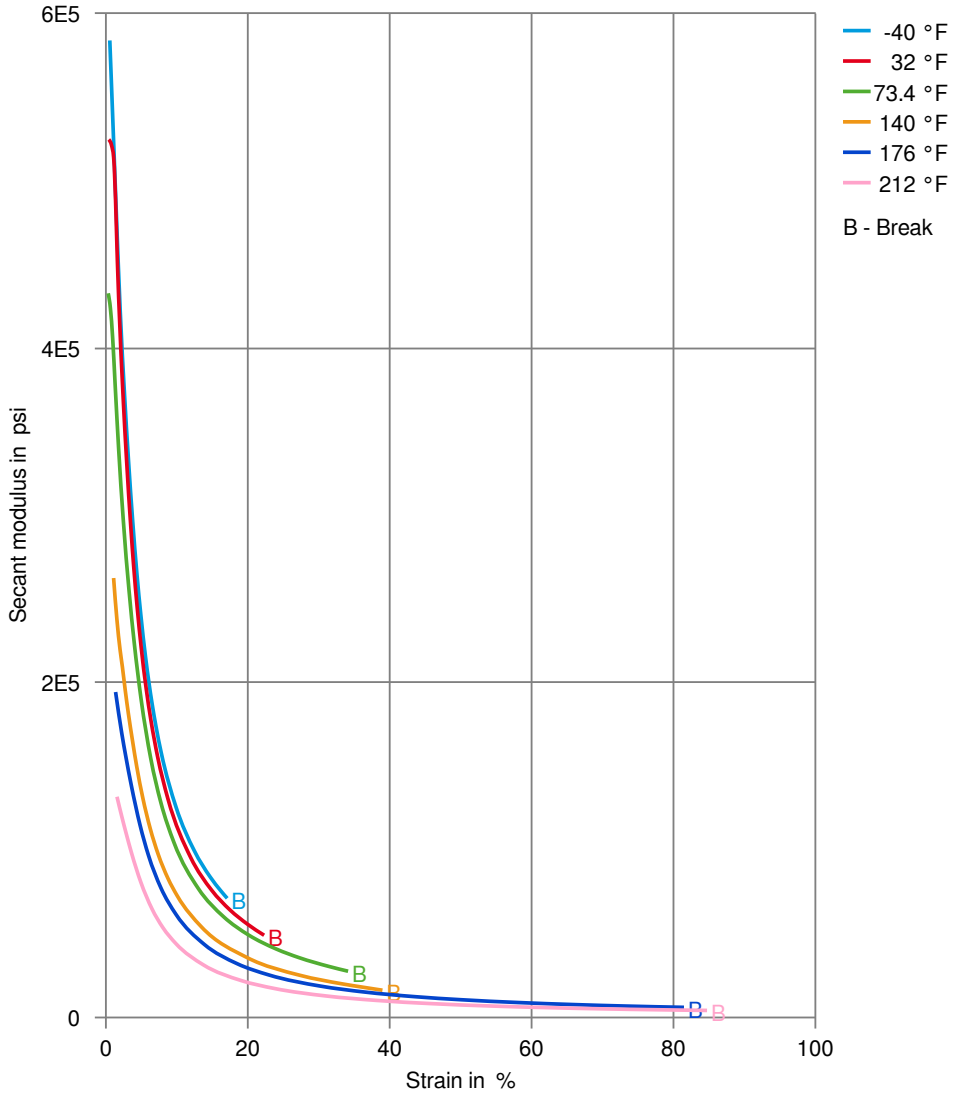


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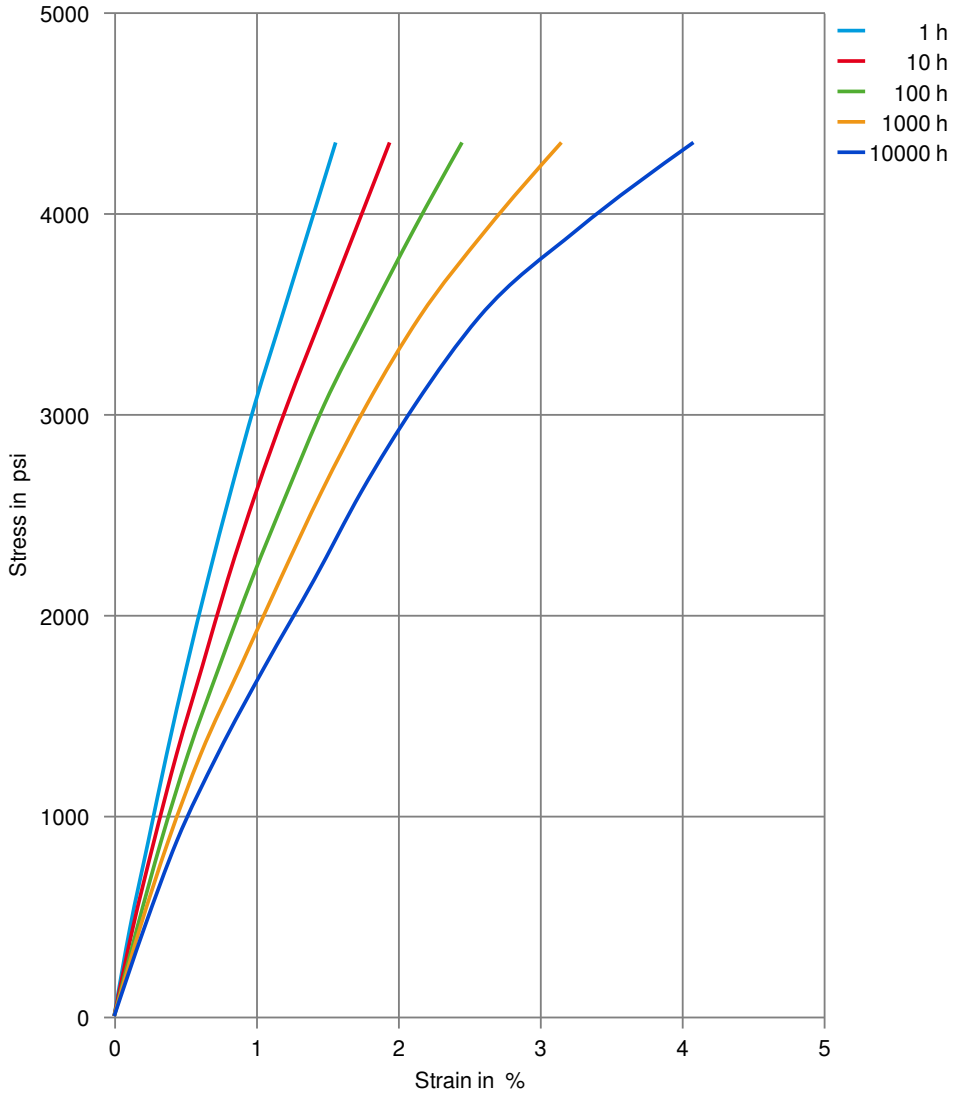
Secant modulus-strain



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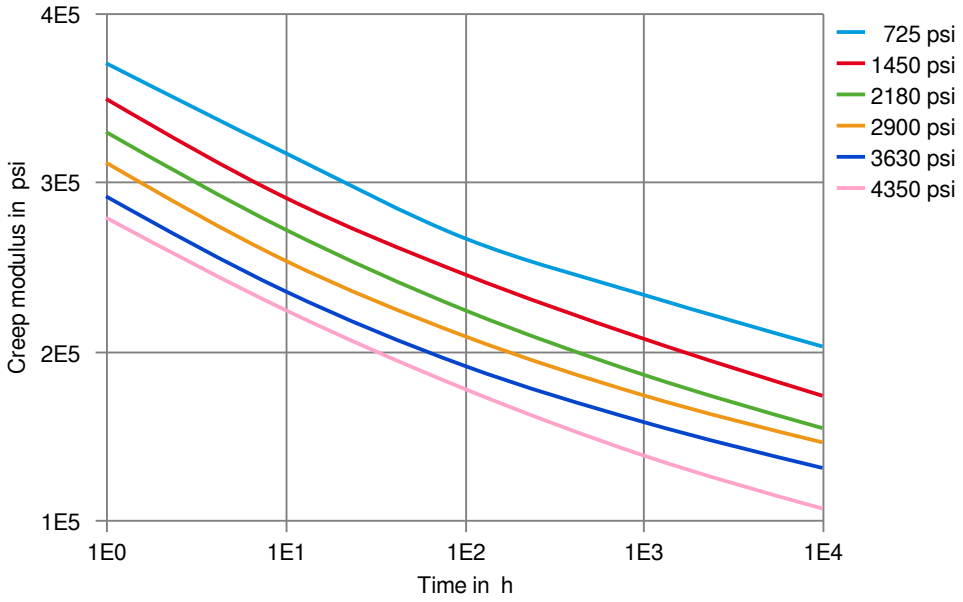
Stress-strain (isochronous) 73.4 °F



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Creep modulus-time 73.4 °F



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