

HOSTAFORM® MT@24U01 - POM

Description

High flow, low melt viscosity, fast cycling grade for medical technology applications
 Hostaform® MT@24U01 is a low melt viscosity for fast cycling, thin walled injection molding.

Hostaform® MT@24U01 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

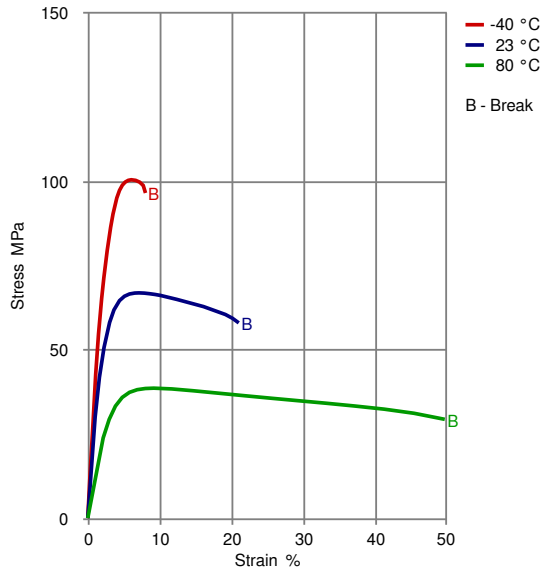
Physical properties	Value	Unit	Test Standard
Density	1410	kg/m ³	ISO 1183
Melt volume rate, MVR	24	cm ³ /10min	ISO 1133
MVR temperature	190	°C	ISO 1133
MVR load	2.16	kg	ISO 1133
Molding shrinkage, parallel (flow)	1.9	%	ISO 294-4, 2577
Molding shrinkage, transverse normal	1.8	%	ISO 294-4, 2577
Water absorption, 23°C-sat	0.65	%	Sim. to ISO 62
Humidity absorption, 23°C/50%RH	0.2	%	ISO 62

Mechanical properties	Value	Unit	Test Standard
Tensile modulus	2900	MPa	ISO 527-1, -2
Tensile stress at yield, 50mm/min	65	MPa	ISO 527-1, -2
Tensile strain at yield, 50mm/min	7.5	%	ISO 527-1, -2
Tensile nominal strain at break, 50mm/min	17	%	ISO 527-1, -2
Tensile creep modulus, 1h	2500	MPa	ISO 899-1
Tensile creep modulus, 1000h	1300	MPa	ISO 899-1
Flexural modulus, 23°C	2800	MPa	ISO 178
Charpy impact strength, 23°C	170	kJ/m ²	ISO 179/1eU
Charpy impact strength, -30°C	170	kJ/m ²	ISO 179/1eU
Charpy notched impact strength, 23°C	5.5	kJ/m ²	ISO 179/1eA
Charpy notched impact strength, -30°C	5.5	kJ/m ²	ISO 179/1eA
Ball indentation hardness, 30s	147	MPa	ISO 2039-1

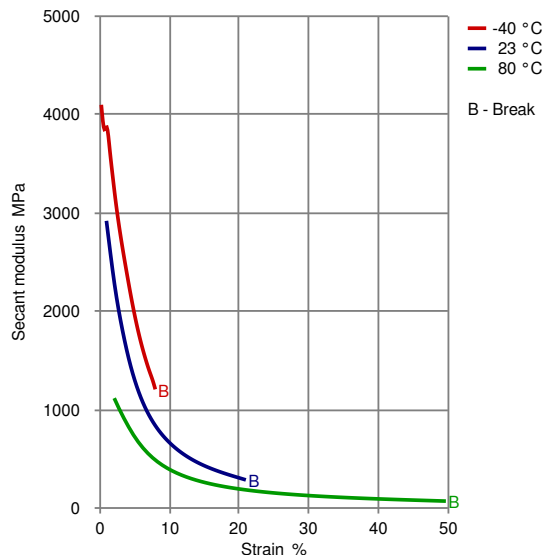
Thermal properties	Value	Unit	Test Standard
Melting temperature, 10°C/min	166	°C	ISO 11357-1/-3
DTUL at 1.8 MPa	106	°C	ISO 75-1, -2
Coeff. of linear therm expansion, parallel	1.1	E-4/°C	ISO 11359-2

Diagrams

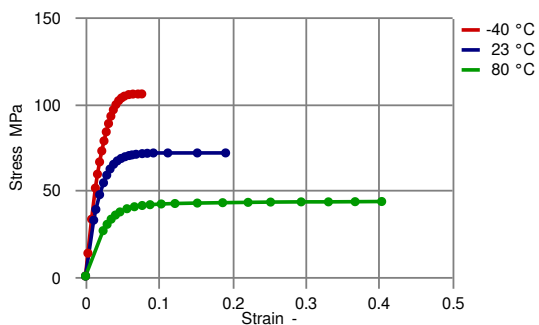
Stress-strain



Secant modulus-strain



True Stress-strain



-40 °C yield at 0.05893 strain, 105.159 stress
 23 °C yield at 0.06897 strain, 70.575 stress
 80 °C yield at 0.08810 strain, 41.359 stress

Typical injection moulding processing conditions

Pre Drying

	Value	Unit
Necessary low maximum residual moisture content	0.15	%
Drying time	3 - 4	h
Drying temperature	100 - 120	°C

Temperature

	Value	Unit
Hopper temperature	20 - 30	°C
Feeding zone temperature	60 - 80	°C
Zone1 temperature	170 - 180	°C

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Zone2 temperature	180 - 190	°C
Zone3 temperature	190 - 200	°C
Zone4 temperature	190 - 210	°C
Nozzle temperature	190 - 210	°C
Melt temperature	190 - 210	°C
Mold temperature	80 - 120	°C
Hot runner temperature	190 - 210	°C

Pressure	Value	Unit
Back pressure max.	40	bar

Speed	Value
Injection speed	slow-medium

Other text information

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.

Characteristics

Special Characteristics	High flow
Product Categories	Medical/Healthcare
Processing	Injection molding
Delivery Form	Pellets

Contact

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General Disclaimer

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colorants or other additives may cause significant variations in data values. Properties of molded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Other than those products expressly identified as medical grade (including by MT® product designation or otherwise), Celanese's products are not intended for use in medical or dental implants. Regardless of any such product designation, any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any equipment, processing technique or material mentioned in this publication should satisfy themselves that they can meet all applicable safety and health standards. We strongly recommend that users seek and adhere to the manufacturer's current instructions for handling each material they use, and entrust the handling of such material to adequately trained personnel only. Please call the telephone numbers listed for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to

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process our products.

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