

HOSTAFORM® MT12U03 | POM | Medical Technology

Description

Hostaform® MT12U03 is a special grade developed for medical industry applications containing low residual monomers and no animal products. Hostaform® MT12U03 is a moderately high flow grade for faster cycling and thin walled injection molding with improved stiffness and hardness compared to Hostaform® MT12U01.

Physical properties	Value	Unit	Test Standard
Density	1410	kg/m ³	ISO 1183
Melt volume rate (MVR)	12	cm ³ /10min	ISO 1133
MVR test temperature	190	°C	ISO 1133
MVR test load	2.16	kg	ISO 1133
Mold shrinkage - parallel	2	%	ISO 294-4
Mold shrinkage - normal	1.8	%	ISO 294-4
Water absorption (23°C-sat)	0.65	%	ISO 62

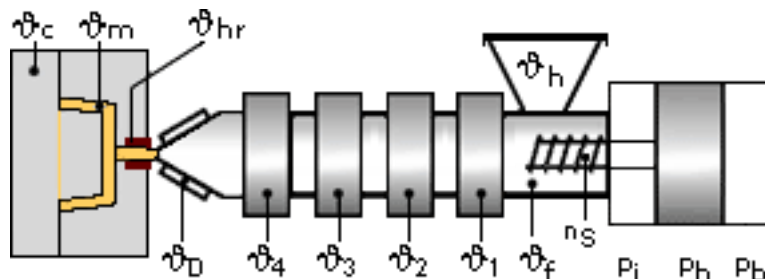
Mechanical properties	Value	Unit	Test Standard
Tensile modulus (1mm/min)	3100	MPa	ISO 527-2/1A
Tensile stress at yield (50mm/min)	70	MPa	ISO 527-2/1A
Tensile strain at yield (50mm/min)	8	%	ISO 527-2/1A
Nominal strain at break (50mm/min)	20	%	ISO 527-2/1A
Tensile creep modulus (1h)	2750	MPa	ISO 899-1
Tensile creep modulus (1000h)	1450	MPa	ISO 899-1
Flexural modulus (23°C)	3000	MPa	ISO 178
Charpy impact strength @ 23°C	120.0	kJ/m ²	ISO 179/1eU
Charpy impact strength @ -30°C	120.0	kJ/m ²	ISO 179/1eU
Charpy notched impact strength @ 23°C	6.0	kJ/m ²	ISO 179/1eA
Charpy notched impact strength @ -30°C	6.0	kJ/m ²	ISO 179/1eA

Thermal properties	Value	Unit	Test Standard
Melting temperature (10°C/min)	170	°C	ISO 11357-1,-2,-3
DTUL @ 1.8 MPa	112	°C	ISO 75-1/-2
Coeff.of linear therm. expansion (parallel)	1.2	E-4/°C	ISO 11359-2

Test specimen production	Value	Unit	Test Standard
Processing conditions acc. ISO	9988-2	-	Internal

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Typical injection moulding processing conditions



Pre Drying:

Necessary low maximum residual moisture content: 0.15%

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.

Drying time: 3 - 4 h

Drying temperature: 120 - 140 °C

Temperature:

	$\varnothing_{\text{Manifold}}$	$\varnothing_{\text{Mold}}$	$\varnothing_{\text{Melt}}$	$\varnothing_{\text{Nozzle}}$	$\varnothing_{\text{Zone4}}$	$\varnothing_{\text{Zone3}}$	$\varnothing_{\text{Zone2}}$	$\varnothing_{\text{Zone1}}$
min (°C)	190	80	190	190	190	190	180	170
max (°C)	210	120	210	210	210	200	190	180

Pressure:

	Inj press	Hold press	Back pressure
min (bar)	600	600	0
max (bar)	1200	1200	5

Speed:

Injection speed: slow-medium

Injection Molding

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

Melt temperature	190-230 °C
Mould temperature	80-120 °C

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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. 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.

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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 (+49 (0) 69 30516299 for Europe and +1 859-372-3244 for the Americas) for additional technical information. Call Customer Services for the appropriate Materials Safety Data Sheets (MSDS) before attempting to process our products.

The products mentioned herein are not intended for use in medical or dental implants.

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