Hostaform® MT12U03

Celanese Corporation - Acetal (POM) Copolymer

Sunday, November 3, 2019

General Information

Product Description

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.

Hostaform® MT12U03 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

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Biocompatible • Fast Molding Cycle	• Good Hardness • Good Stiffness	• High Flow • No Animal Derived Components
Uses	• Medical/Healthcare Applications	• Thin-walled Parts	
Agency Ratings	• DMF 11559 • FDA 21 CFR 177.2470	• ISO 10993 • MAF 1079	• USP Class VI
RoHS Compliance	• Contact Manufacturer		
Processing Method	• Injection Molding		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.41	g/cm³	ISO 1183
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	12	cm³/10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.8	%	
Flow	2.0	%	
Water Absorption (Saturation, 73°F)	0.65	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.20	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	450000	psi	ISO 527-2/1A
Tensile Stress (Yield)	10200	psi	ISO 527-2/1A/50
Tensile Strain (Yield)	8.0	%	ISO 527-2/1A/50
Nominal Tensile Strain at Break	28	%	ISO 527-2/1A/50
Tensile Creep Modulus (1 hr)	399000	psi	ISO 899-1
Tensile Creep Modulus (1000 hr)	210000	psi	ISO 899-1
Flexural Modulus (73°F)	435000	psi	ISO 178
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	2.9	ft·lb/in²	
73°F	2.9	ft·lb/in²	

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Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	95	ft·lb/in²	
73°F	95	ft·lb/in²	
Notched Izod Impact Strength (73°F)	2.6	ft·lb/in²	ISO 180/1A
Hardness	**Nominal Value**	**Unit**	**Test Method**
Ball Indentation Hardness [2]	22600	psi	ISO 2039-1
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (264 psi, Unannealed)	225	°F	ISO 75-2/A
Vicat Softening Temperature	316	°F	ISO 306/B50
Melting Temperature [3]	338	°F	ISO 11357-3
Melting Temperature	329	°F	
CLTE - Flow	6.7E-5	in/in/°F	ISO 11359-2

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	212 to 248	°F
Drying Time	3.0 to 4.0	hr
Suggested Max Moisture	0.15	%
Rear Temperature	338 to 356	°F
Middle Temperature	356 to 374	°F
Front Temperature	374 to 392	°F
Nozzle Temperature	374 to 410	°F
Processing (Melt) Temp	374 to 410	°F
Mold Temperature	176 to 248	°F
Injection Rate	Slow-Moderate	
Back Pressure	< 580	psi

Injection Notes

Zone4 temperature: 190 to 210°C
Hot runner temperature: 190 to 210°C

Notes

[1] Typical properties: these are not to be construed as specifications.

[2] 30s

[3] 10°C/min