

# HOSTAFORM® MT®12R01 ECO-B

Improved flow and slip grade for medical technology applications

Hostaform® MT®12R01 ECO-B is a low melt viscosity and improved slip grade for fast cycling, thin walled injection molding.

Hostaform® MT®12R01 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.

## Rheological properties

Melt volume-flow rate	12 cm <sup>3</sup> /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	2900 MPa	ISO 527-1/-2
Yield stress, 50mm/min	65 MPa	ISO 527-1/-2
Yield strain, 50mm/min	9 %	ISO 527-1/-2
Nominal strain at break	25 %	ISO 527-1/-2
Flexural Modulus	2800 MPa	ISO 178
Shear Modulus	1000 MPa	ISO 6721
Tensile creep modulus, 1h	2500 MPa	ISO 899-1
Tensile creep modulus, 1000h	1300 MPa	ISO 899-1
Charpy impact strength, 23°C	200 kJ/m <sup>2</sup>	ISO 179/1eU
Charpy impact strength, -30°C	200 kJ/m <sup>2</sup>	ISO 179/1eU
Charpy notched impact strength, 23°C	6.5 kJ/m <sup>2</sup>	ISO 179/1eA
Charpy notched impact strength, -30°C	6 kJ/m <sup>2</sup>	ISO 179/1eA
Ball indentation hardness, H 358/30	143 MPa	ISO 2039-1

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## Thermal properties

Melting temperature, 10 °C/min	166 °C	ISO 11357-1/-3
Temp. of deflection under load, 1.8 MPa	102 °C	ISO 75-1/-2
Vicat softening temperature, 50 °C/h, 50N	151 °C	ISO 306
Coeff. of linear therm. expansion, parallel	110 E-6/K	ISO 11359-1/-2

## 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 Temperature	100 - 120 °C	
Drying Time, Dehumidified Dryer	3 - 4 h	
Melt Temperature Optimum	210 °C	Internal
Max. mould temperature	80 - 120 °C	
Back pressure	4 MPa	
Injection speed	slow-medium	

## Characteristics

Additives	Release agent, Biobased
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## Processing Texts

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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