

## 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

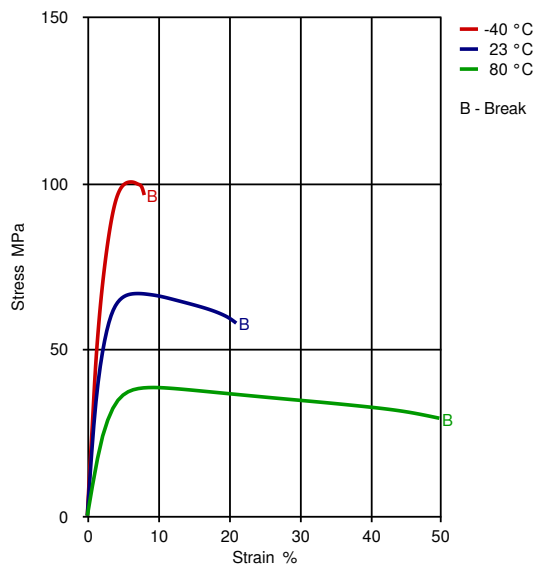
| Physical properties             | Value | Unit                   | Test Standard   |
|---------------------------------|-------|------------------------|-----------------|
| Density                         | 1410  | kg/m <sup>3</sup>      | ISO 1183        |
| Melt volume rate, MVR           | 24 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

| Mechanical properties                     | Value | Unit              | Test Standard |
|---|-------|-------------------|---------------|
| Tensile modulus                           | 2900  | MPa               | ISO 527-2/1A  |
| Tensile stress at yield, 50mm/min         | 65    | MPa               | ISO 527-2/1A  |
| Tensile strain at yield, 50mm/min         | 7.5   | %                 | ISO 527-2/1A  |
| Tensile nominal strain at break, 50mm/min | 17    | %                 | ISO 527-2/1A  |
| 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 <sup>2</sup> | ISO 179/1eU   |
| Charpy impact strength, -30°C             | 170   | kJ/m <sup>2</sup> | ISO 179/1eU   |
| Charpy notched impact strength, 23°C      | 5.5   | kJ/m <sup>2</sup> | ISO 179/1eA   |
| Charpy notched impact strength, -30°C     | 5.5   | kJ/m <sup>2</sup> | ISO 179/1eA   |
| Ball indentation hardness, 30s            | 147   | MPa               | ISO 2039-1    |

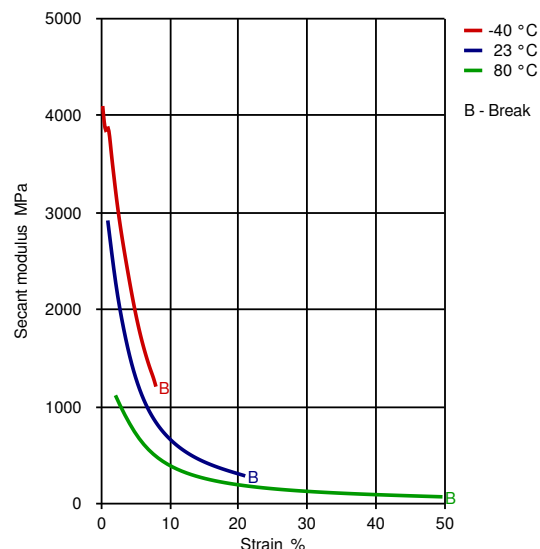
| Thermal properties                         | Value | Unit   | Test Standard  |
|--|-------|--------|----------------|
| Melting temperature, 10°C/min              | 166   | °C     | ISO 11357-1/-3 |
| DTUL at 1.8 MPa                            | 106   | °C     | ISO 75-1, -2   |
| Coeff. of linear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

## Diagrams

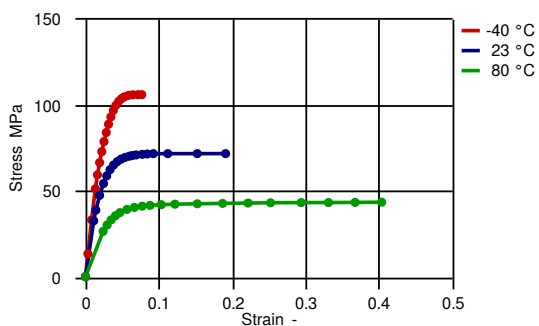
### Stress-strain



### Secant modulus-strain

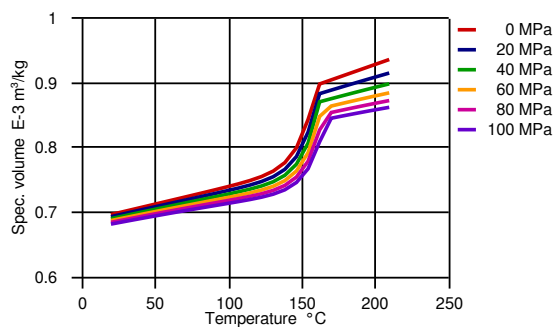


### True Stress-strain



-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

### Moldflow Specific volume-temperature (pvT)



Indirect Dilatometry

### 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   |
| Zone2 temperature        | 180 - 190 | °C   |
| Zone3 temperature        | 190 - 200 | °C   |

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|                        |           |    |
|------------------------|-----------|----|
| 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

#### Product Categories

Medical technology

#### Processing

Injection molding

#### Delivery Form

Pellets

#### Contact

##### Americas

8040 Dixie Highway  
Florence, KY 41042 USA  
Product Information Service  
t: +1-800-833-4882  
t: +1-859-372-3244  
Customer Service  
t: +1-800-526-4960  
t: +1-859-372-3214  
e: info-engineeredmaterials-am@celanese.com

##### Asia

4560 Jinke Road  
Zhang Jiang Hi Tech Park  
Shanghai 201203 PRC  
Customer Service  
t: +86 21 3861 9266  
f: +86 21 3861 9599  
e: info-engineeredmaterials-asia@celanese.com

##### Europe

Am Unisys-Park 1  
65843 Sulzbach, Germany  
Product Information Service  
t: +49-800-86427-531  
t: +49-(0)-69-45009-1011  
e: info-engineeredmaterials-eu@celanese.com

### General Disclaimer

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