

# HOSTAFORM® M15HP

## HOSTAFORM®

Hostaform® acetal copolymer grade M15HP is a high viscosity polymer providing optimum performance in injection molding. This grade provides overall excellent performance in applications requiring high stiffness.

### Product information

|                      |       |           |
|----------------------|-------|-----------|
| Resin Identification | POM   | ISO 1043  |
| Part Marking Code    | >POM< | ISO 11469 |

### Rheological properties

|                                  |                            |                 |
|----------------------------------|----------------------------|-----------------|
| Melt volume-flow rate            | 1.5 cm <sup>3</sup> /10min | ISO 1133        |
| Temperature                      | 190 °C                     |                 |
| Load                             | 2.16 kg                    |                 |
| Melt mass-flow rate              | 1.8 g/10min                | ISO 1133        |
| Melt mass-flow rate, Temperature | 190 °C                     |                 |
| Melt mass-flow rate, Load        | 2.16 kg                    |                 |
| Moulding shrinkage, parallel     | 2.6 %                      | ISO 294-4, 2577 |
| Moulding shrinkage, normal       | 2.0 %                      | ISO 294-4, 2577 |

### Typical mechanical properties

|  |                       |              |
|--|-----------------------|--------------|
| Tensile modulus                        | 2700 MPa              | ISO 527-1/-2 |
| Tensile stress at yield, 50mm/min      | 66 MPa                | ISO 527-1/-2 |
| Tensile strain at yield, 50mm/min      | 20 %                  | ISO 527-1/-2 |
| Flexural modulus                       | 2500 MPa              | ISO 178      |
| Compressive stress at 1% strain        | 29 MPa                | ISO 604      |
| Charpy impact strength, 23 °C          | 280 kJ/m <sup>2</sup> | ISO 179/1eU  |
| Charpy impact strength, -30 °C         | 220 kJ/m <sup>2</sup> | ISO 179/1eU  |
| Charpy notched impact strength, 23 °C  | 12 kJ/m <sup>2</sup>  | ISO 179/1eA  |
| Charpy notched impact strength, -30 °C | 8.5 kJ/m <sup>2</sup> | ISO 179/1eA  |
| Izod notched impact strength, 23 °C    | 9.5 kJ/m <sup>2</sup> | ISO 180/1A   |
| Hardness, Rockwell, M-scale            | 84                    | ISO 2039-2   |
| Poisson's ratio                        | 0.38 <sup>[C]</sup>   |              |

[C]: Calculated

### Thermal properties

|  |           |                |
|--|-----------|----------------|
| Melting temperature, 10 °C/min                           | 173 °C    | ISO 11357-1/-3 |
| Temperature of deflection under load, 1.8 MPa            | 101 °C    | ISO 75-1/-2    |
| Temperature of deflection under load, 0.45 MPa           | 158 °C    | ISO 75-1/-2    |
| Coefficient of linear thermal expansion (CLTE), parallel | 130 E-6/K | ISO 11359-1/-2 |
| Coefficient of linear thermal expansion (CLTE), normal   | 120 E-6/K | ISO 11359-1/-2 |

### Physical/Other properties

|                          |                        |                |
|--------------------------|------------------------|----------------|
| Humidity absorption, 2mm | 0.2 %                  | Sim. to ISO 62 |
| Water absorption, 2mm    | 0.75 %                 | Sim. to ISO 62 |
| Density                  | 1410 kg/m <sup>3</sup> | ISO 1183       |

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### Injection

|                                 |              |
|---------------------------------|--------------|
| Drying Recommended              | no           |
| Drying Temperature              | 100 °C       |
| Drying Time, Dehumidified Dryer | 3 - 4 h      |
| Processing Moisture Content     | ≤0.2 %       |
| Melt Temperature Optimum        | 200 °C       |
| Min. melt temperature           | 190 °C       |
| Max. melt temperature           | 210 °C       |
| Screw tangential speed          | ≤0.3 m/s     |
| Mold Temperature Optimum        | 105 °C       |
| Min. mould temperature          | 90 °C        |
| Max. mould temperature          | 120 °C       |
| Hold pressure range             | 60 - 120 MPa |
| Back pressure                   | 4 MPa        |

### Characteristics

|               |  |
|---------------|--|
| Processing    | Injection Moulding, Film Extrusion, Extrusion, Other Extrusion, Blow Moulding, Calendering |
| Delivery form | Pellets  |
| Additives     | Release agent  |

### Additional information

Processing Notes

### Pre-Drying

Drying is not normally required. If material has come in contact with moisture through improper storage or handling or through regrind use, drying may be necessary to prevent splay and odor problems.

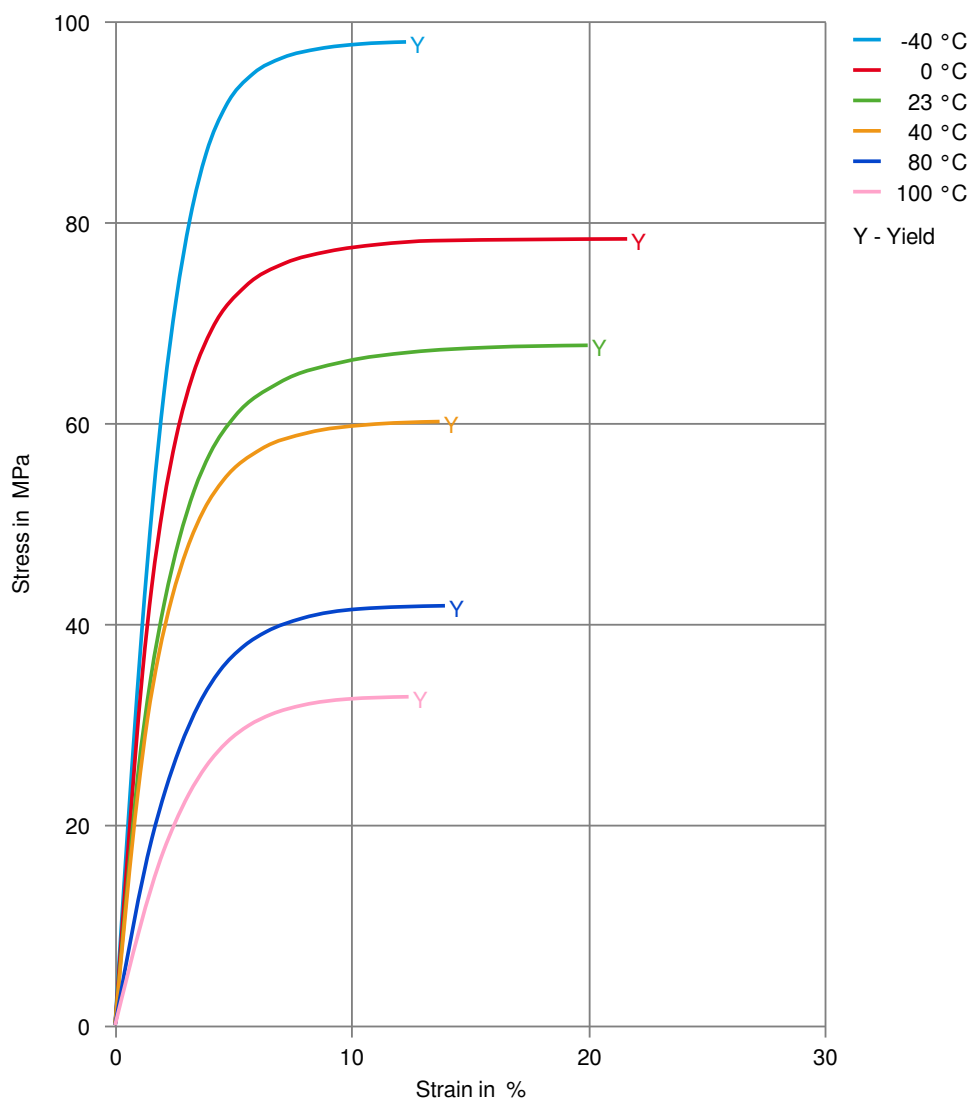
### Automotive

| OEM            | STANDARD        | ADDITIONAL INFORMATION |
|----------------|-----------------|------------------------|
| Continental    | TST N 055 54.40 | (TST N 055 54.40-001)  |
| General Motors | GMW22P-POM-C1   | Black                  |
| General Motors | GMW22P-POM-C1   | Natural                |

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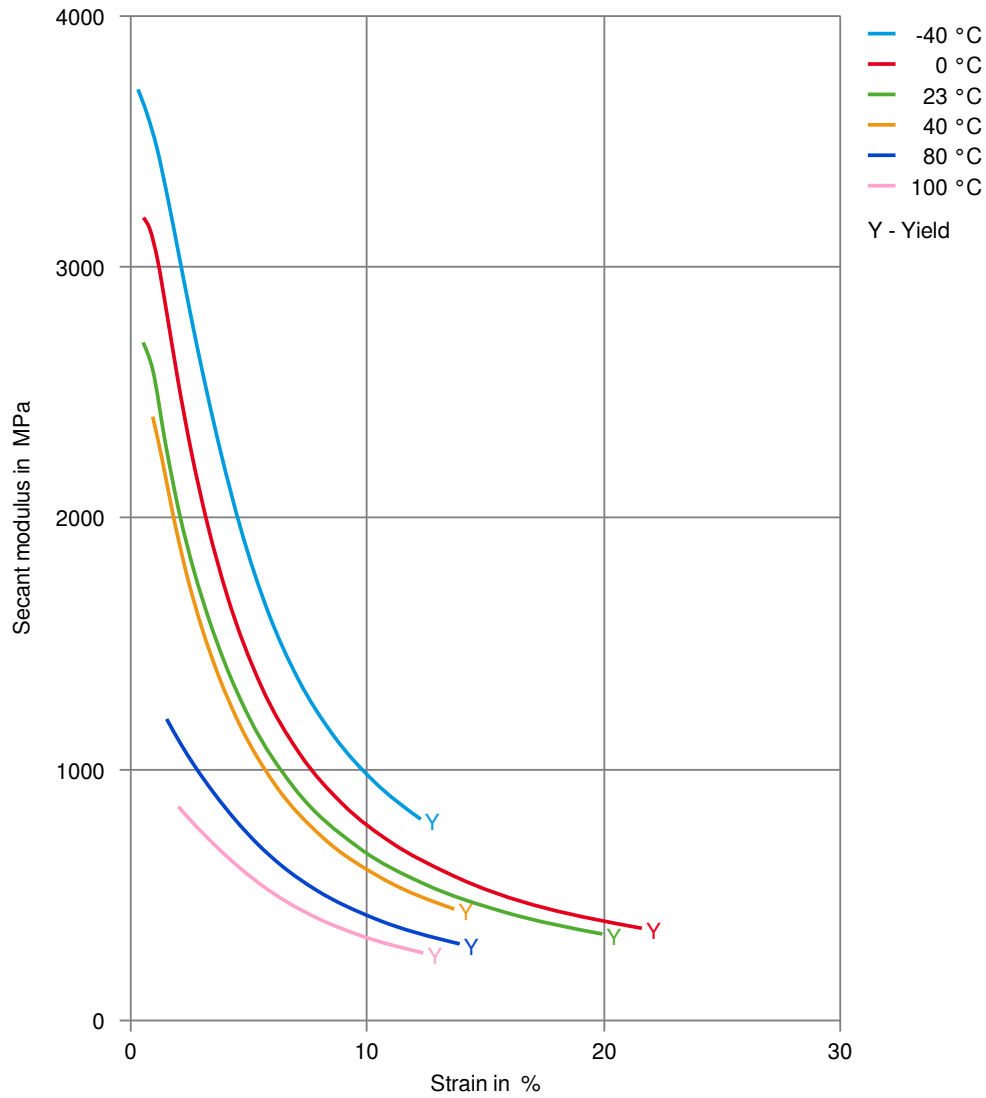
## Stress-strain



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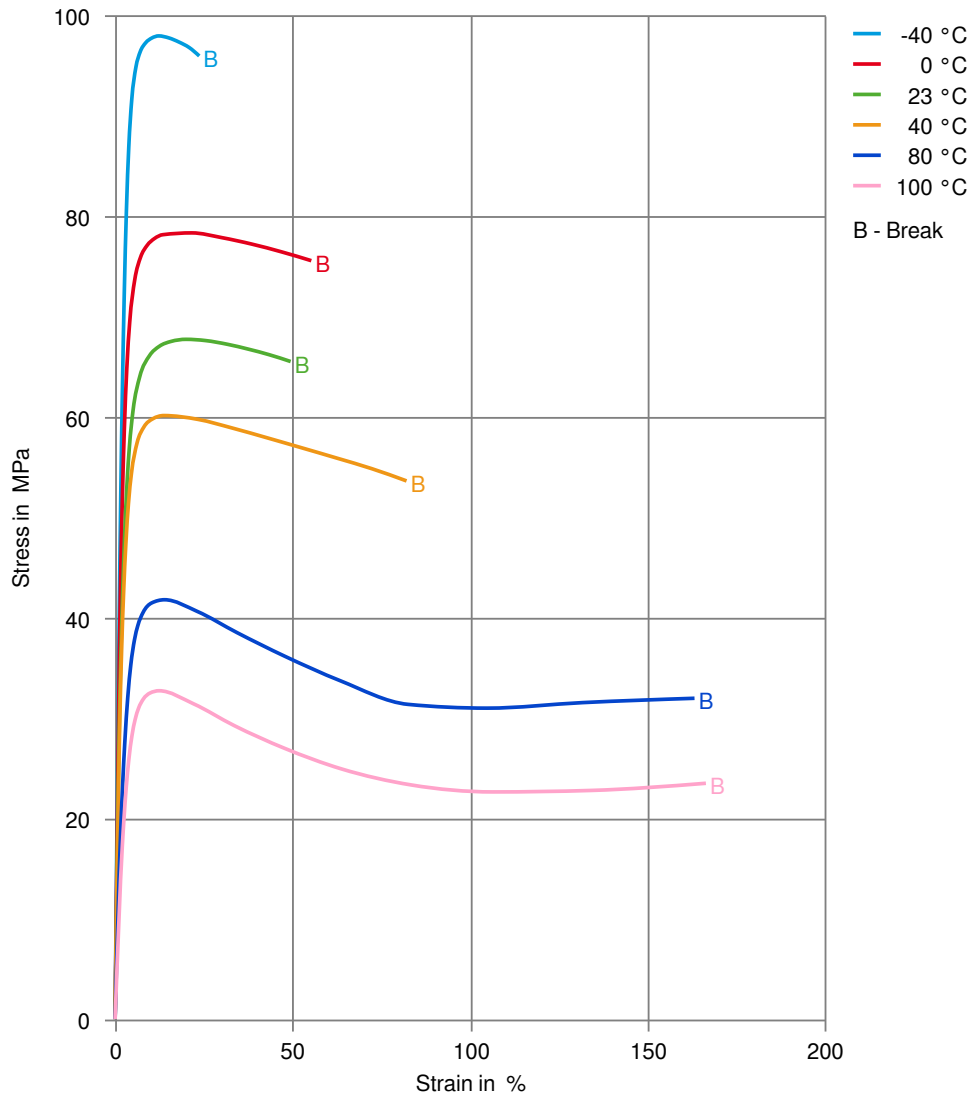
## Secant modulus-strain



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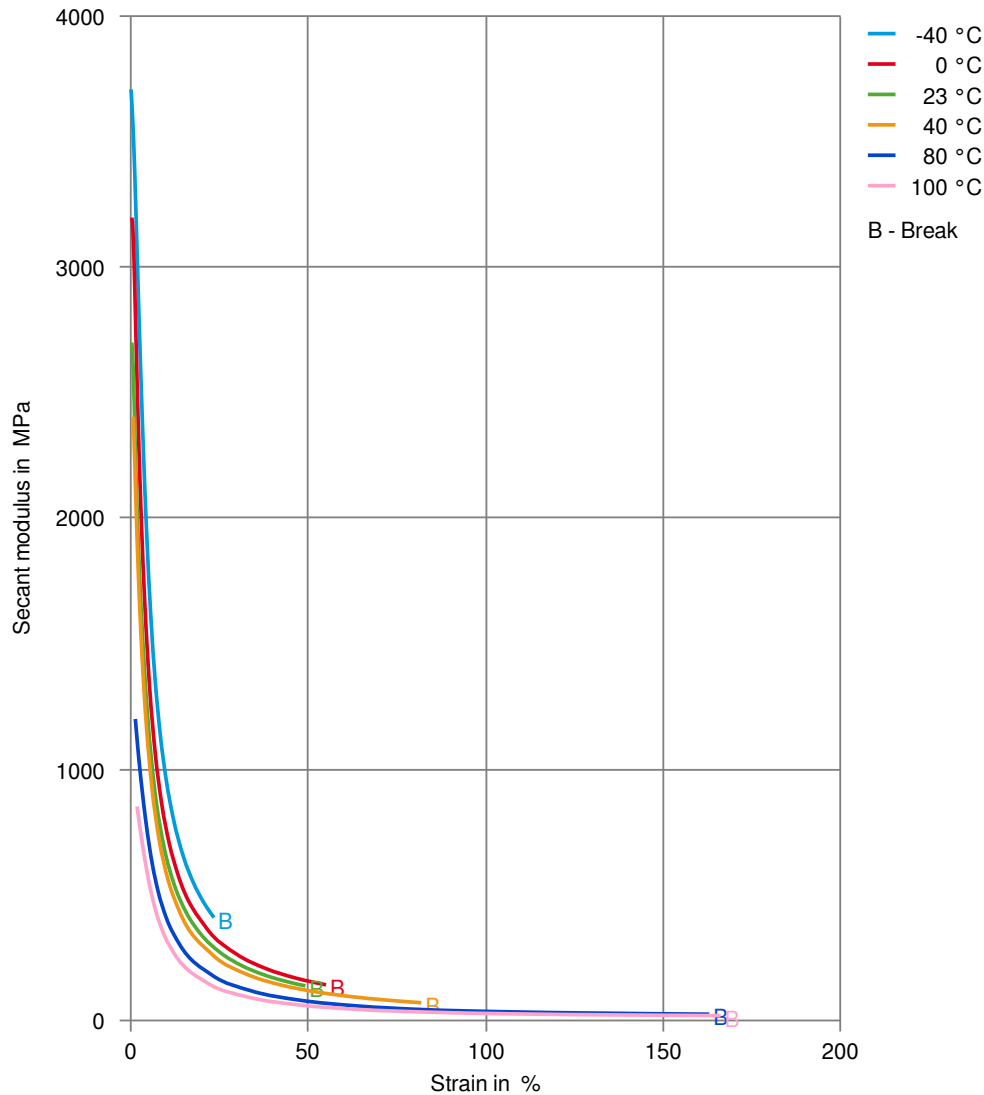
Stress-strain, 50mm/min



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Secant modulus-strain, 50mm/min



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