# HOSTAFORM® C 52021 XAP®

## HOSTAFORM®

POM copolymer

Extremely easy flowing Injection molding type with low emissions for very thin-walled precision molded parts with unfavourite flow-path-wall thickness relation; permits processing at reduced temperature and also shorter cycle times.

Emission according to VDA 275 < 10 mg/kg (natural grades)

Burning rate ISO 3795 and FMVSS 302 < 75 mm/min for a thickness more than 1 mm.

Monomers and additives are listed in EU-Regulation (EU) 10/2011 FDA compliant according to 21 CFR 177.2470 FDA = Food and Drug Administration (USA)

## Product information

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

## Rheological properties

| | | | |
|---|---|---|---|
| Melt volume-flow rate | 39 | $cm^3$/10min | ISO 1133 |
| Temperature | 374 | °F | |
| Load | 4.76 | lb | |
| Molding shrinkage, parallel | 1.9 | % | ISO 294-4, 2577 |
| Molding shrinkage, normal | 1.8 | % | ISO 294-4, 2577 |

## Typical mechanical properties

| | | | |
|---|---|---|---|
| Tensile modulus | 435000 | psi | ISO 527-1/-2 |
| Tensile stress at yield, 50mm/min | 9400 | psi | ISO 527-1/-2 |
| Tensile strain at yield, 50mm/min | 7 | % | ISO 527-1/-2 |
| Nominal strain at break | 15 | % | ISO 527-1/-2 |
| Flexural modulus | 406000 | psi | ISO 178 |
| Tensile creep modulus, 1h | 363000 | psi | ISO 899-1 |
| Tensile creep modulus, 1000h | 189000 | psi | ISO 899-1 |
| Charpy impact strength, 23°C | 71.4 | $ftlb/in^2$ | ISO 179/1eU |
| Charpy impact strength, -30°C | 71.4 | $ftlb/in^2$ | ISO 179/1eU |
| Charpy notched impact strength, 23°C | 2.38 | $ftlb/in^2$ | ISO 179/1eA |
| Charpy notched impact strength, -30°C | 2.38 | $ftlb/in^2$ | ISO 179/1eA |
| Ball indentation hardness, H 358/30 | 21500 | psi | ISO 2039-1 |

## Thermal properties

| | | | |
|---|---|---|---|
| Melting temperature, 10°C/min | 331 | °F | ISO 11357-1/-3 |
| Temperature of deflection under load, 1.8 MPa | 223 | °F | ISO 75-1/-2 |
| Coefficient of linear thermal expansion (CLTE), parallel | 0.61 | E-4/°F | ISO 11359-1/-2 |
| Thermal conductivity of melt | 0.155 | W/(m K) | ISO 22007-2 |
| Specific heat capacity of melt | 2060 | J/(kg K) | ISO 22007-4 |

## Electrical properties

| | | | |
|---|---|---|---|
| Relative permittivity, 100Hz | 4 | | IEC 62631-2-1 |
| Relative permittivity, 1MHz | 4 | | IEC 62631-2-1 |
| Dissipation factor, 100Hz | 30 | E-4 | IEC 62631-2-1 |
| Dissipation factor, 1MHz | 50 | E-4 | IEC 62631-2-1 |
| Volume resistivity | 1E12 | Ohm.m | IEC 62631-3-1 |

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| | | | |
|---|---|---|---|
| Surface resistivity | 1E14 | Ohm | IEC 62631-3-2 |
| Electric strength | 889 | kV/in | IEC 60243-1 |
| Comparative tracking index | 600 | | IEC 60112 |

## Physical/Other properties

| | | | |
|---|---|---|---|
| Humidity absorption, 2mm | 0.2 | % | Sim. to ISO 62 |
| Water absorption, 2mm | 0.65 | % | Sim. to ISO 62 |
| Density | 0.0509 | lb/in$^3$ | ISO 1183 |

## Injection

| | | |
|---|---|---|
| Drying Recommended | no | |
| Drying Temperature | 212 | °F |
| Drying Time, Dehumidified Dryer | 3 - 4 | h |
| Processing Moisture Content | ≤0.2 | % |
| Melt Temperature Optimum | 392 | °F |
| Min. melt temperature | 374 | °F |
| Max. melt temperature | 410 | °F |
| Max. screw tangential speed | ≤0.3 | m/s |
| Mold Temperature Optimum | 212 | °F |
| Min. mold temperature | 176 | °F |
| Max. mold temperature | 248 | °F |
| Hold pressure range | 8700 - 17400 | psi |
| Hold Pressure Time<br>(h is the max. wall thickness of the part in mm) | 2h$^2$-3 | s |
| Back pressure | 580 | psi |
| Ejection temperature | 325 | °F |

## Characteristics

| | |
|---|---|
| Processing | Injection Molding |
| Additives | Release agent |
| Special characteristics | High Flow, Low emissions |

## Additional information

Injection molding

### Preprocessing

To achive low emission values pre drying using a recirculating air dryer (100 to 120 °C / max. 40 mm layer / 3 to 6 hours) is recommended.

Max. Water content 0,1 %

### Processing

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

### Postprocessing

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Processing Notes

Conditioning e.g. moisturizing is not necessary.

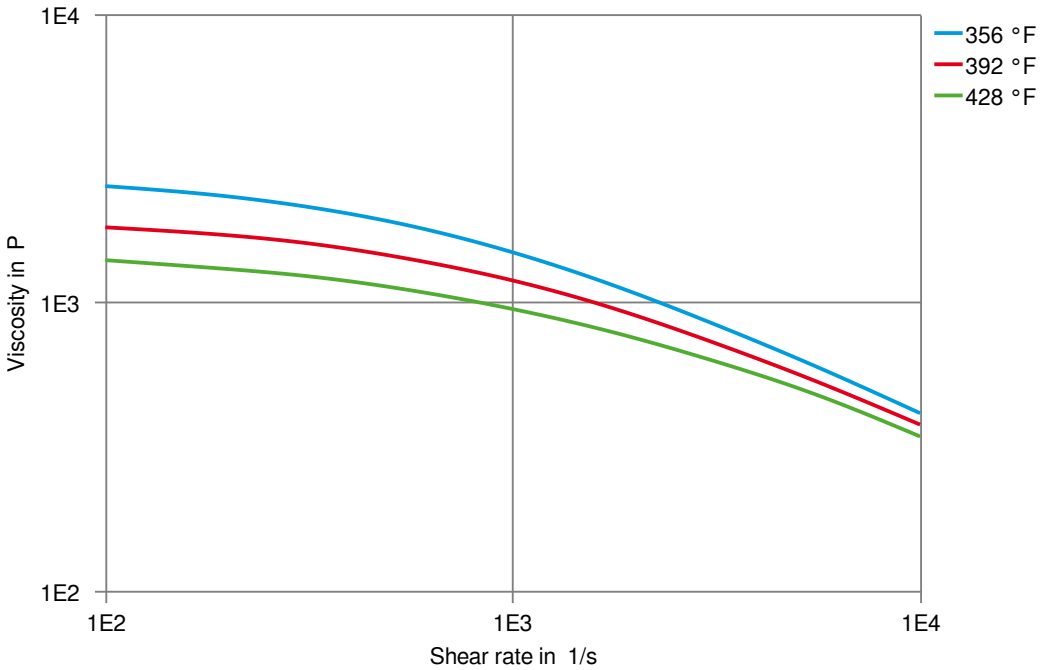
### Pre-Drying

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.

### Storage

The product can then be stored in standard conditions until processed.

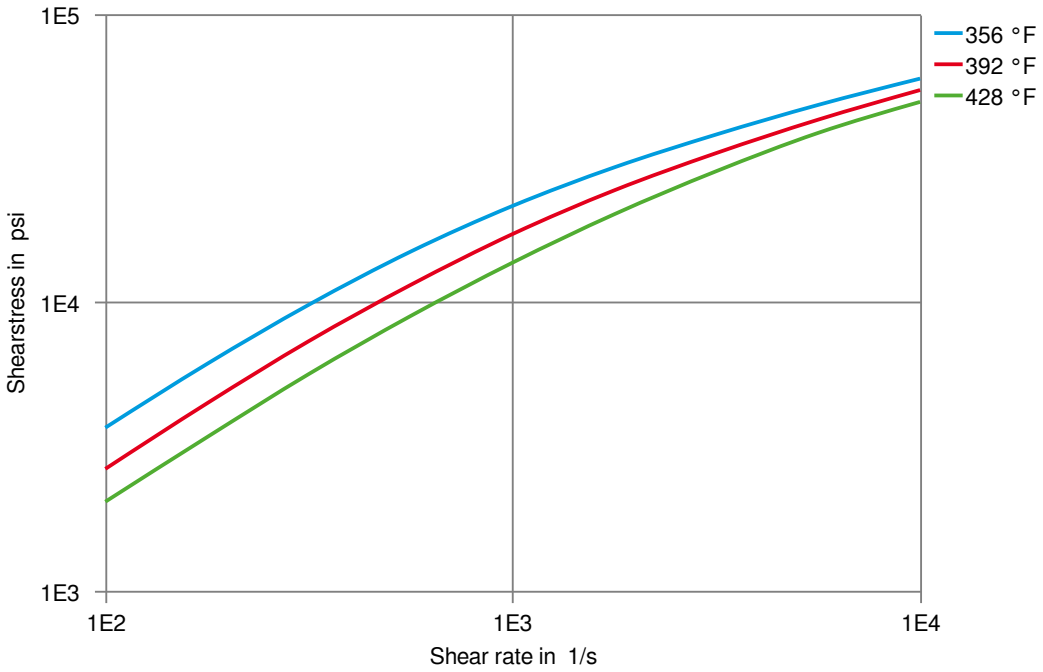
## Viscosity-shear rate



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### Shearstress-shear rate



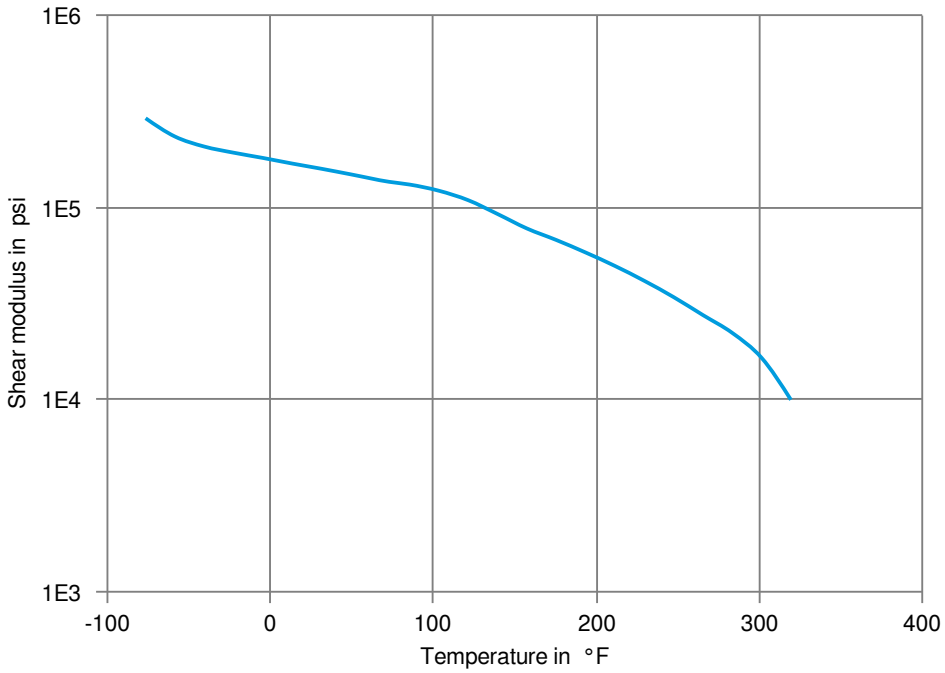



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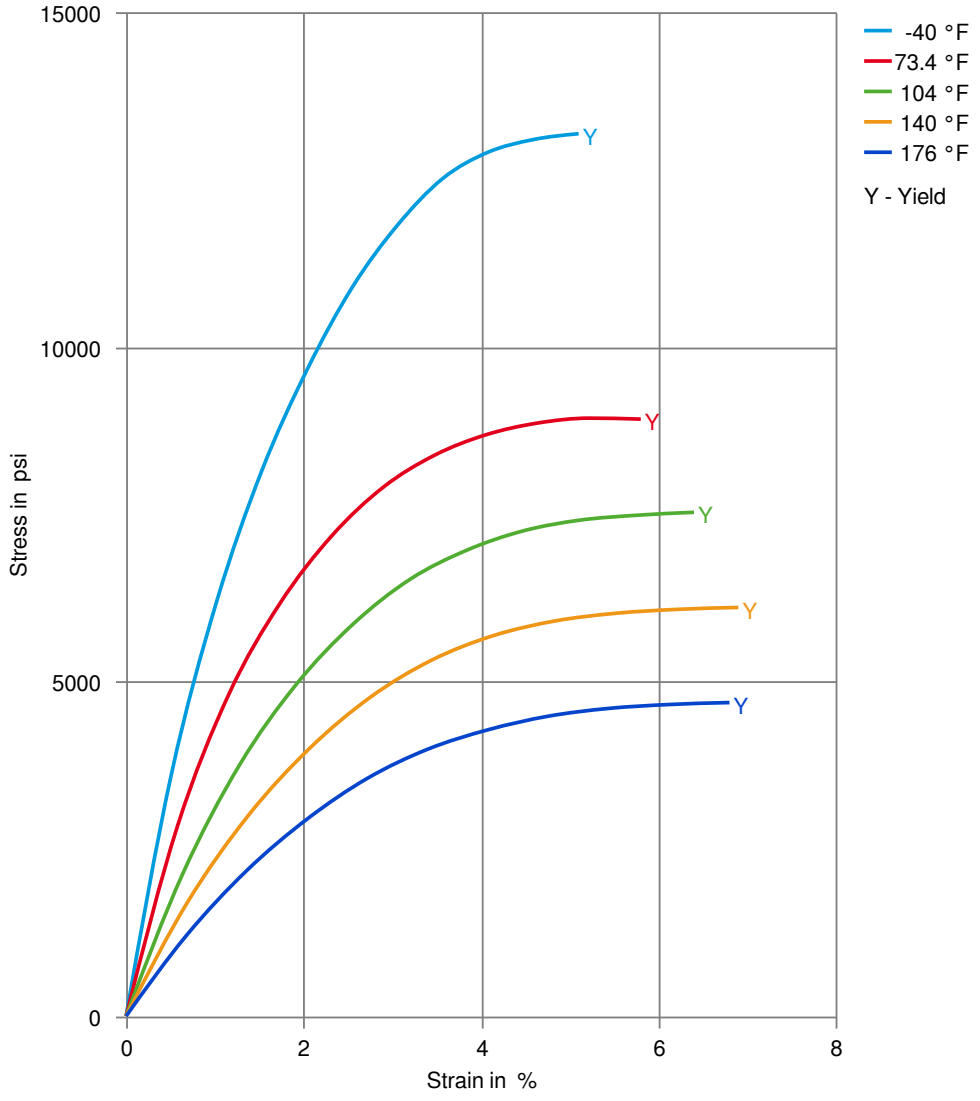
### Dynamic Shear modulus-temperature



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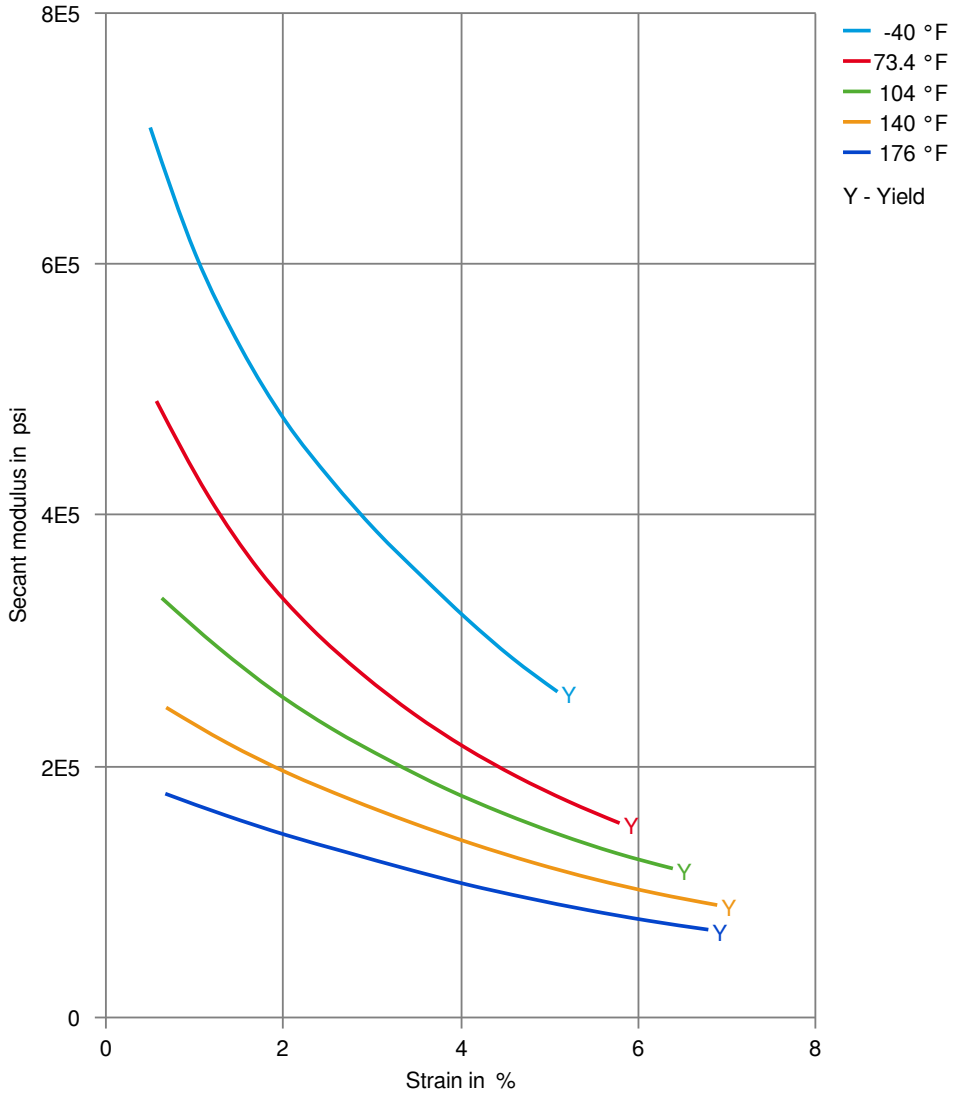
### Stress-strain



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### Secant modulus-strain






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