

## HOSTAFORM® C 9021 XAP®2 ECO-C 872 HOSTAFORM®

POM copolymer injection molding grade with reduced emissions especially for automotive interior application. Burning rate according to FMVSS 302 < 100 mm/min (1 mm thickness) Emission according to VDA 275 < 2 mg/kg (natural grades) Emission according to VDA 275 < 5 mg/kg (colored grades)  
ECO-C: Hostaform® POM C 9021 XAP®2 ECO-C 872 incorporates circular content derived from captured carbon dioxide emissions in the finished product through mass balance allocation. The product is a drop-in replacement to the standard grade with the same performance and processing properties and contributes to the displacement of virgin fossil fuel resources. The feedstock utilizing captured carbon dioxide emissions are ISCC CFC certified as low carbon intensity methanol.

### Product information

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

### Rheological properties

|                              |                          |                 |
|------------------------------|--------------------------|-----------------|
| Melt volume-flow rate        | 8 cm <sup>3</sup> /10min | ISO 1133        |
| Temperature                  | 190 °C                   |                 |
| Load                         | 2.16 kg                  |                 |
| Moulding shrinkage, parallel | 2.0 <sup>[1]</sup> %     | ISO 294-4, 2577 |
| Moulding shrinkage, normal   | 1.9 <sup>[1]</sup> %     | ISO 294-4, 2577 |
| [1]: @ 195 °C                |                          |                 |

### Typical mechanical properties

|                                        |                                      |              |
|----------------------------------------|--------------------------------------|--------------|
| Tensile modulus                        | 2700 MPa                             | ISO 527-1/-2 |
| Tensile stress at yield, 50mm/min      | 64 MPa                               | ISO 527-1/-2 |
| Tensile strain at yield, 50mm/min      | 10 %                                 | ISO 527-1/-2 |
| Nominal strain at break                | 35 %                                 | ISO 527-1/-2 |
| Flexural modulus                       | 2600 MPa                             | ISO 178      |
| Tensile creep modulus, 1h              | 2400 MPa                             | ISO 899-1    |
| Tensile creep modulus, 1000h           | 1200 MPa                             | ISO 899-1    |
| Charpy impact strength, 23 °C          | 220 <sup>[P]</sup> 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  | 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  |
| Poisson's ratio                        | 0.38 <sup>[C]</sup>                  |              |
| [P]: Partial Break                     |                                      |              |
| [C]: Calculated                        |                                      |              |

### Thermal properties

|                                                          |           |                |
|----------------------------------------------------------|-----------|----------------|
| Melting temperature, 10 °C/min                           | 166 °C    | ISO 11357-1/-3 |
| Temperature of deflection under load, 1.8 MPa            | 104 °C    | ISO 75-1/-2    |
| Temperature of deflection under load, 0.45 MPa           | 157 °C    | ISO 75-1/-2    |
| Coefficient of linear thermal expansion (CLTE), parallel | 120 E-6/K | ISO 11359-1/-2 |
| Coefficient of linear thermal expansion (CLTE), normal   | 120 E-6/K | ISO 11359-1/-2 |

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### Electrical properties

|                              |            |               |
|------------------------------|------------|---------------|
| Relative permittivity, 100Hz | 4          | IEC 62631-2-1 |
| Relative permittivity, 1MHz  | 4          | IEC 62631-2-1 |
| Dissipation factor, 100Hz    | 20 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 |
| Surface resistivity          | 1E14 Ohm   | IEC 62631-3-2 |
| Electric strength            | 35 kV/mm   | 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                  | 1410 kg/m³ | ISO 1183       |

### Injection

|                                 |              |
|---------------------------------|--------------|
| Drying Recommended              | no           |
| Drying Temperature              | 100 °C       |
| Drying Time, Dehumidified Dryer | 3 - 4 h      |
| Processing Moisture Content     | ≤0.2 %       |
| Melt Temperature Optimum        | 190 °C       |
| Min. melt temperature           | 180 °C       |
| Max. melt temperature           | 200 °C       |
| Screw tangential speed          | ≤0.3 m/s     |
| Mold Temperature Optimum        | 100 °C       |
| Min. mould temperature          | 80 °C        |
| Max. mould temperature          | 120 °C       |
| Hold pressure range             | 60 - 120 MPa |
| Back pressure                   | 4 MPa        |

### Characteristics

|                         |                    |
|-------------------------|--------------------|
| Processing              | Injection Moulding |
| Delivery form           | Pellets            |
| Additives               | Release agent      |
| Special characteristics | Low emissions      |
| Sustainability          | Carbon Capture     |

### Additional information

Injection molding

### Preprocessing

To achieve 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 %

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## Processing

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

Melt temperature 180-190 °C  
Mould temperature 60-120 °C

## Postprocessing

Conditioning e.g. moisturizing is not necessary.

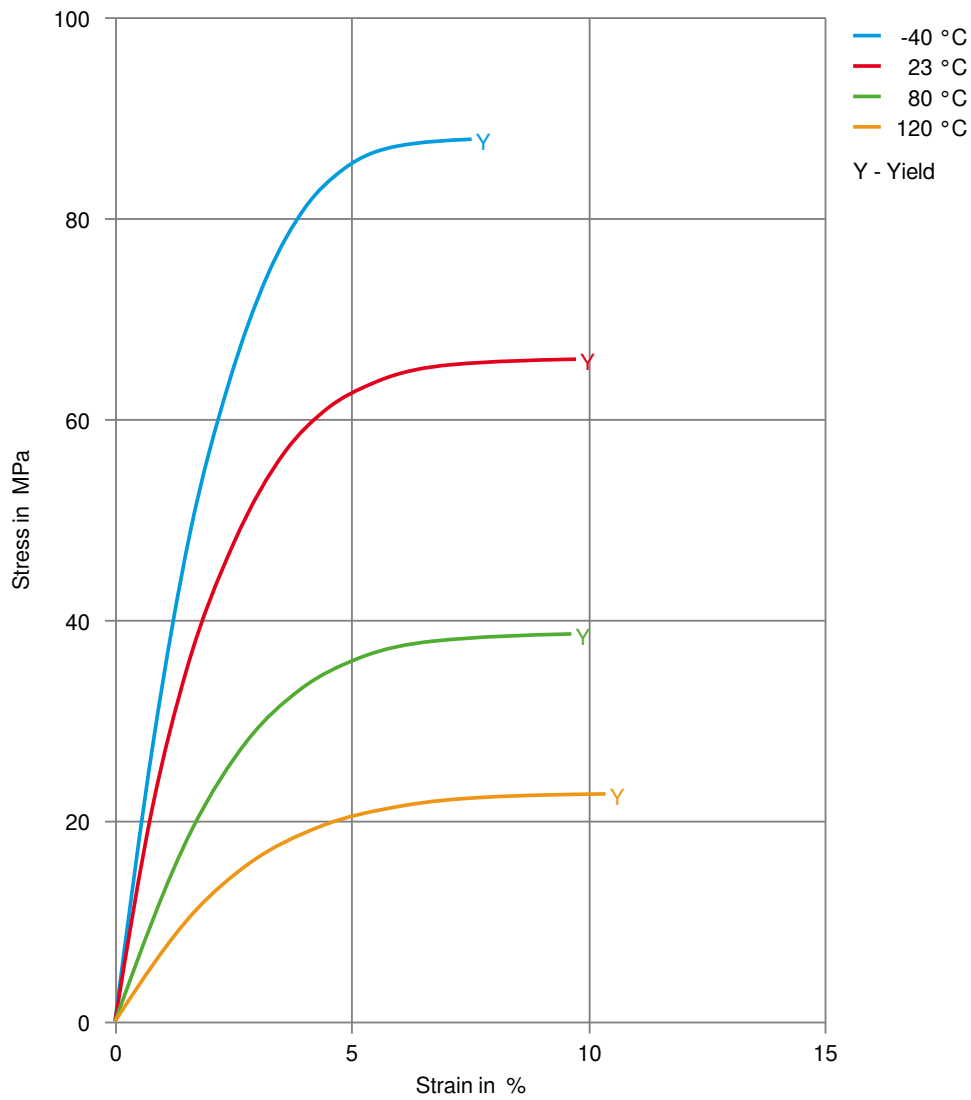
## Pre-Drying

recommended

Processing Notes

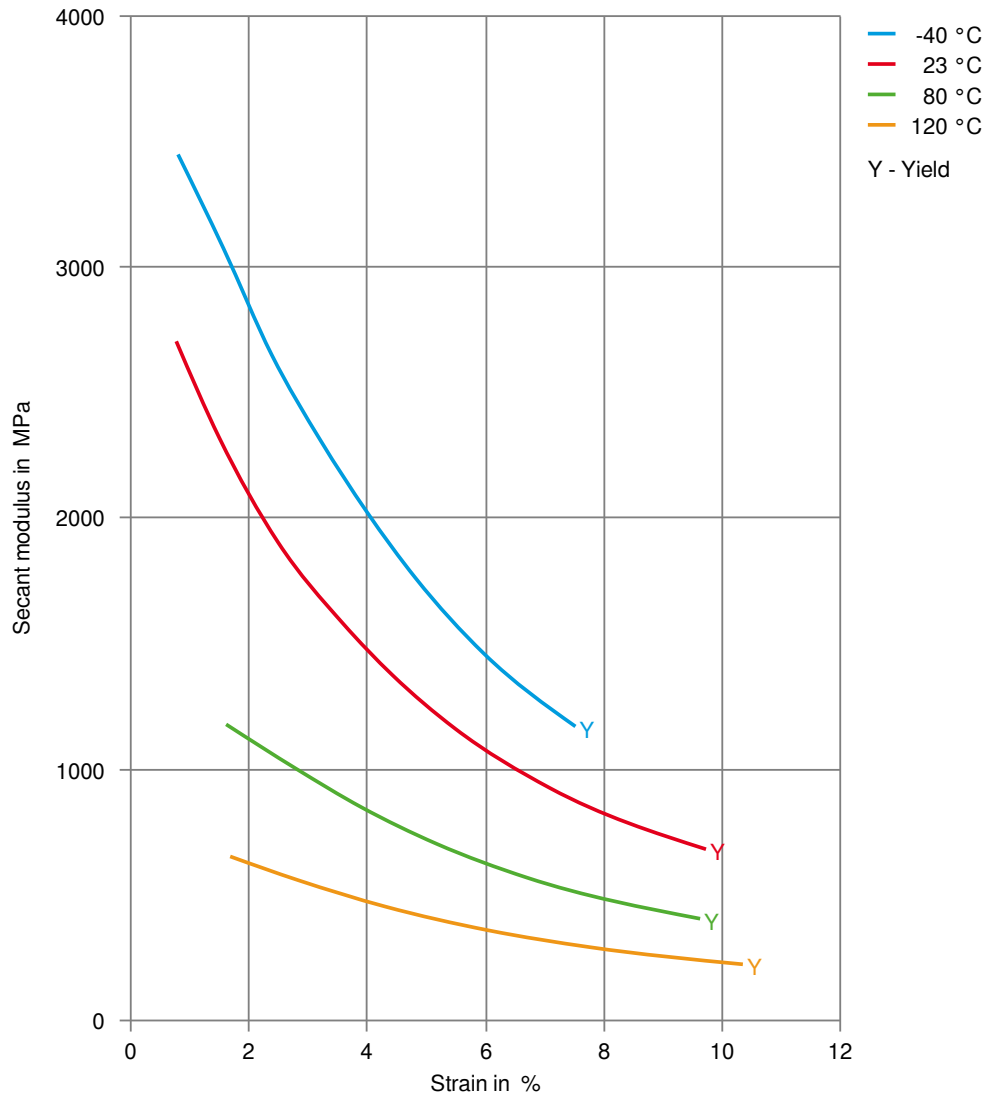
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## Stress-strain



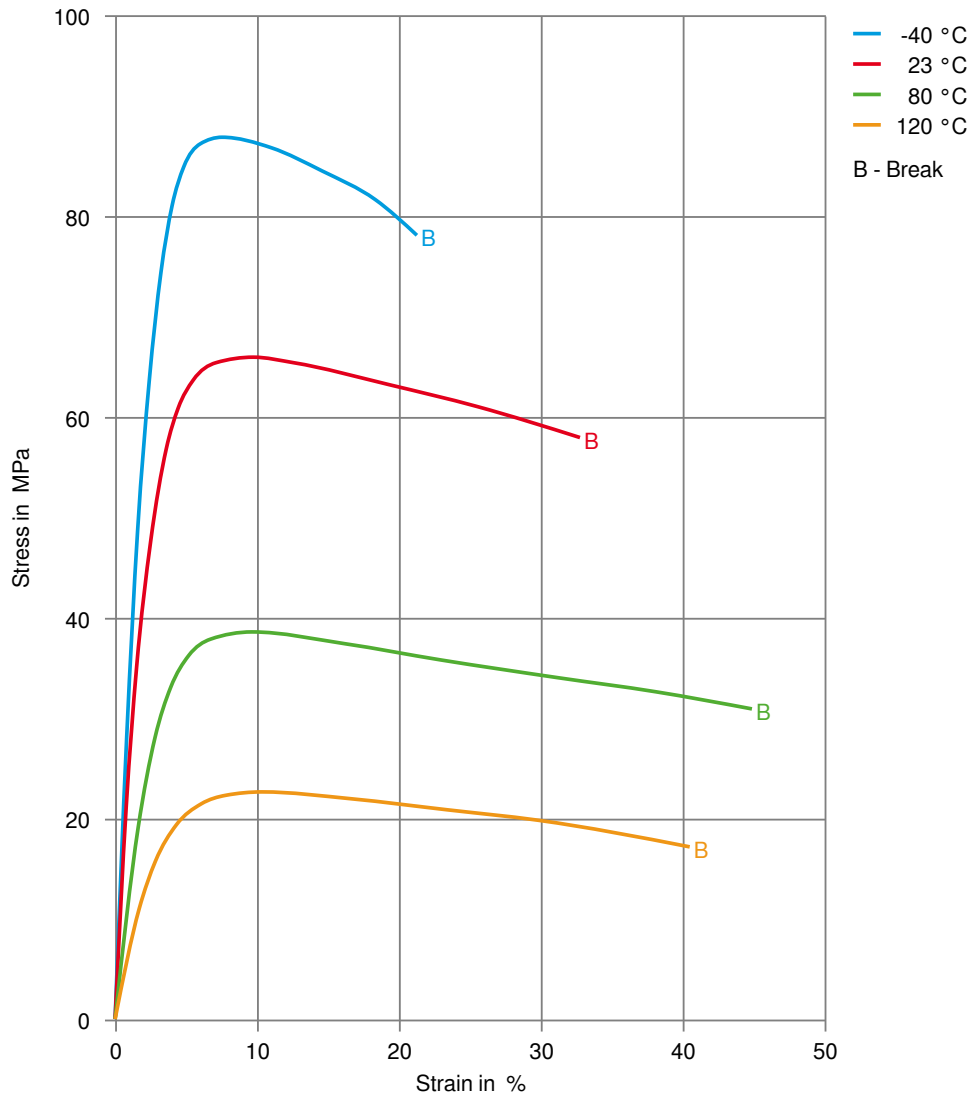
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Secant modulus-strain



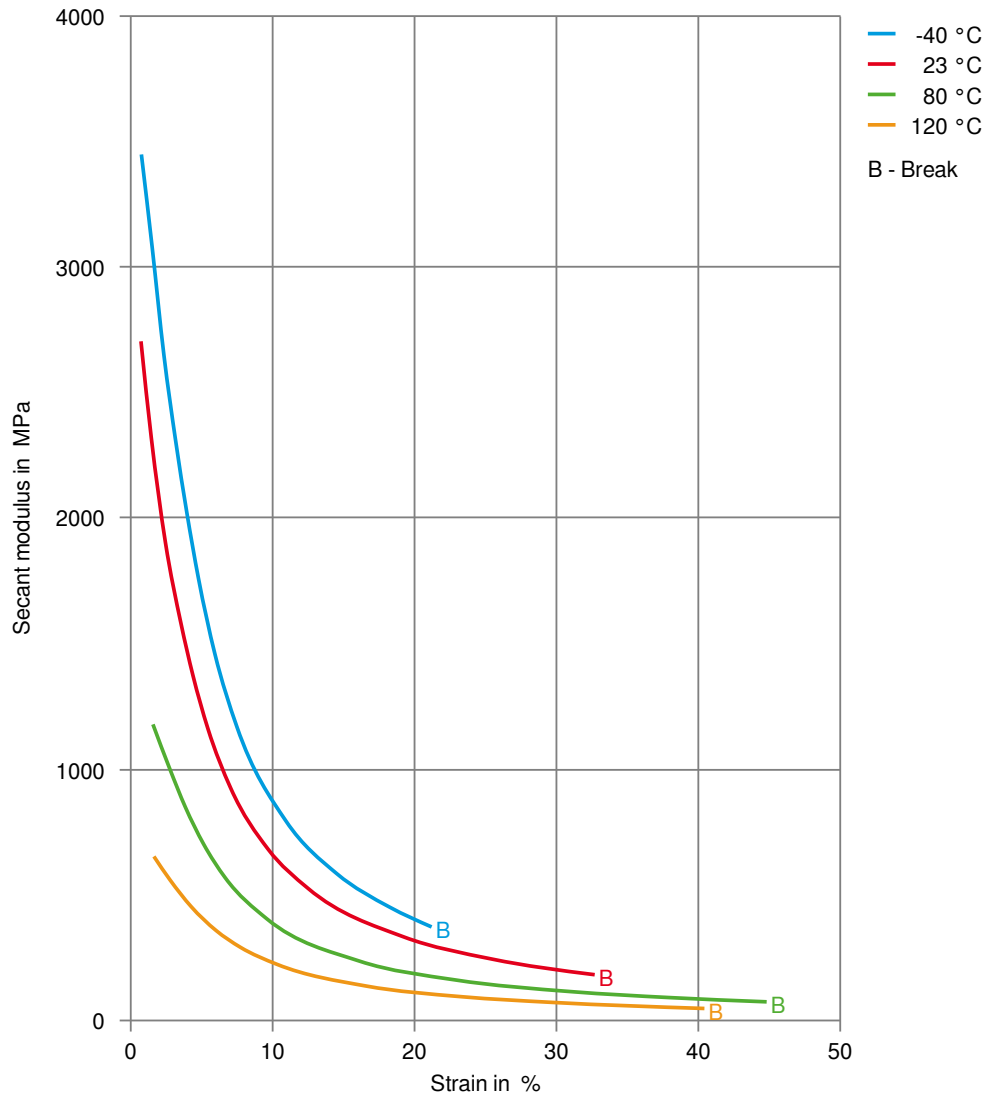
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Stress-strain, 50mm/min



# HOSTAFORM® C 9021 XAP®2 ECO-C 872 HOSTAFORM®

Secant modulus-strain, 50mm/min



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