

HOSTAFORM® C 9021 GV3/20

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Chemical abbreviation according to ISO 1043-1: POM Molding compound ISO 29988- POM-K, M-GNR, 03-002, GB20 POM copolymer Injection molding type, reinforced with ca. 20 % glass spheres; high resistance to thermal and oxidative degradation. UL-registration in natural and a thickness more than 0.81 mm, in black and a thickness more than 1.5 mm as UL94 HB, temperature index UL 746 B for a thickness of 3 mm, electrical 105 °C, mechanical 95 °C (tensile impact) and 100 °C (tensile). Burning rate ISO 3795 and FMVSS 302 < 100 mm/min for a thickness more than 1 mm. Ranges of applications: For low-warpage molded parts with higher rigidity and hardness. FMVSS = Federal Motor Vehicle Safety Standard (USA) UL = Underwriters Laboratories (USA)

Product information

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

Rheological properties

| | | |
|------------------------------------|----------------------------|-----------------|
| Melt volume-flow rate | 8.5 cm ³ /10min | ISO 1133 |
| Temperature | 190 °C | |
| Load | 2.16 kg | |
| Moulding shrinkage range, parallel | 1.9 % | ISO 294-4, 2577 |
| Moulding shrinkage range, normal | 1.6 % | ISO 294-4, 2577 |

Typical mechanical properties

| | | |
|---------------------------------------|-----------------------|--------------|
| Tensile modulus | 3400 MPa | ISO 527-1/-2 |
| Tensile stress at yield, 50mm/min | 46 MPa | ISO 527-1/-2 |
| Tensile strain at yield, 50mm/min | 6.5 % | ISO 527-1/-2 |
| Nominal strain at break | 15 % | ISO 527-1/-2 |
| Flexural modulus | 3200 MPa | ISO 178 |
| Compressive stress at 1% strain | 26 MPa | ISO 604 |
| Tensile creep modulus, 1h | 3000 MPa | ISO 899-1 |
| Tensile creep modulus, 1000h | 1700 MPa | ISO 899-1 |
| Charpy impact strength, 23°C | 50 kJ/m ² | ISO 179/1eU |
| Charpy impact strength, -30°C | 50 kJ/m ² | ISO 179/1eU |
| Charpy notched impact strength, 23°C | 3.5 kJ/m ² | ISO 179/1eA |
| Charpy notched impact strength, -30°C | 3.5 kJ/m ² | ISO 179/1eA |
| Ball indentation hardness, H 358/30 | 164 MPa | ISO 2039-1 |
| Poisson's ratio | 0.37 ^[C] | |

[C]: Calculated

Thermal properties

| | | |
|--|-----------|----------------|
| Melting temperature, 10°C/min | 166 °C | ISO 11357-1/-3 |
| Temperature of deflection under load, 1.8 MPa | 110 °C | ISO 75-1/-2 |
| Coefficient of linear thermal expansion (CLTE), parallel | 100 E-6/K | ISO 11359-1/-2 |

Flammability

| | | |
|--------------------------------------|----------|-----------------|
| Burning Behav. at 1.5mm nom. thickn. | HB class | IEC 60695-11-10 |
| Thickness tested | 1.5 mm | IEC 60695-11-10 |
| Burning Behav. at thickness h | HB class | IEC 60695-11-10 |
| Thickness tested | 0.81 mm | IEC 60695-11-10 |
| UL recognition | yes | UL 94 |

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Electrical properties

| | | |
|------------------------------|------------|---------------|
| Relative permittivity, 100Hz | 4.5 | IEC 62631-2-1 |
| Relative permittivity, 1MHz | 4.2 | IEC 62631-2-1 |
| Dissipation factor, 100Hz | 200 E-4 | IEC 62631-2-1 |
| Dissipation factor, 1MHz | 70 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 | 0.15 % | Sim. to ISO 62 |
| Water absorption, 2mm | 0.8 % | Sim. to ISO 62 |
| Density | 1530 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 | 200 °C |
| Min. melt temperature | 190 °C |
| Max. melt temperature | 210 °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 | 2 MPa |

Characteristics

| | |
|-------------------------|--------------------|
| Processing | Injection Moulding |
| Delivery form | Pellets |
| Additives | Release agent |
| Special characteristics | Low Warpage |

Additional information

Injection molding

Preprocessing

General drying is not necessary due to low moisture absorption of the resin.

In case of bad storage conditions (water contact or condensed water) the use of a recirculating air dryer (100 to 120 °C / max. 40 mm layer / 3 to 6 hours) is recommended.

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Max. Water content 0,2 %

Processing

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

Postprocessing

Conditioning e.g. moisturizing is not necessary.

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.

Storage

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

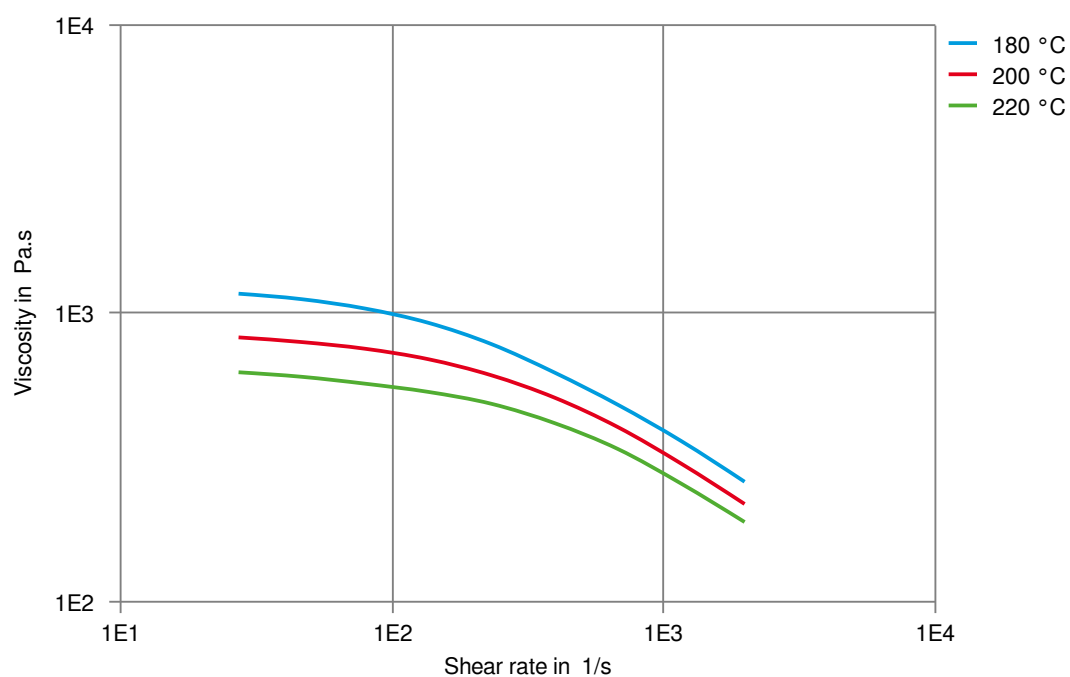
Automotive

| OEM | STANDARD | ADDITIONAL INFORMATION |
|-------------|-----------------|------------------------|
| Bosch | N28 BN22-X014 | Natural |
| Bosch | N28 BN22-X014 | Black |
| Continental | TST N 055 54.15 | |

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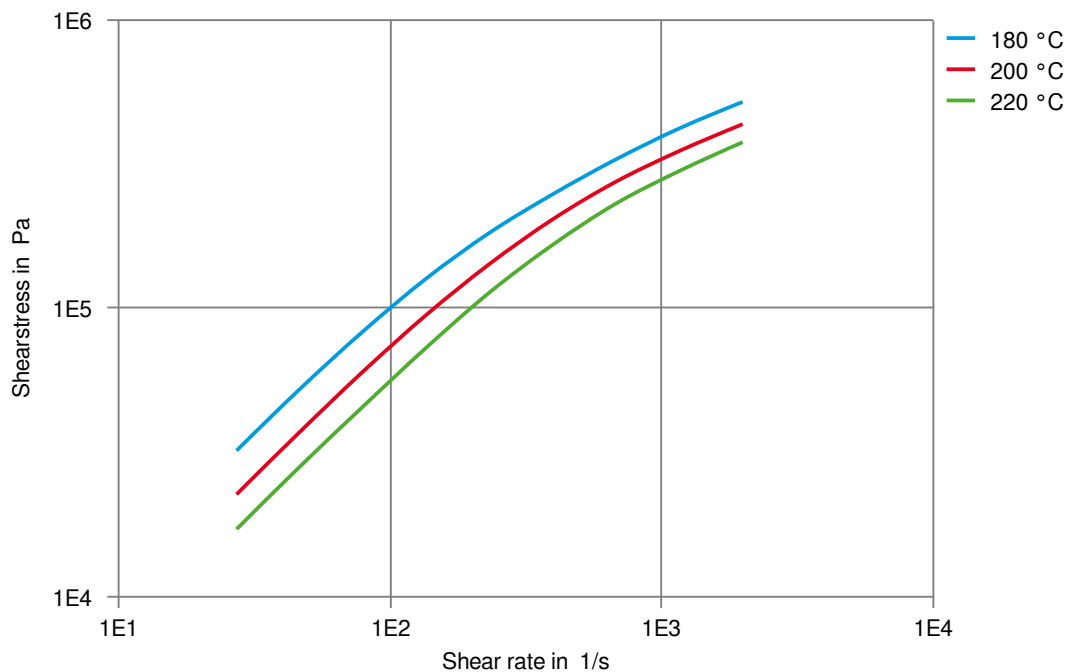
Viscosity-shear rate



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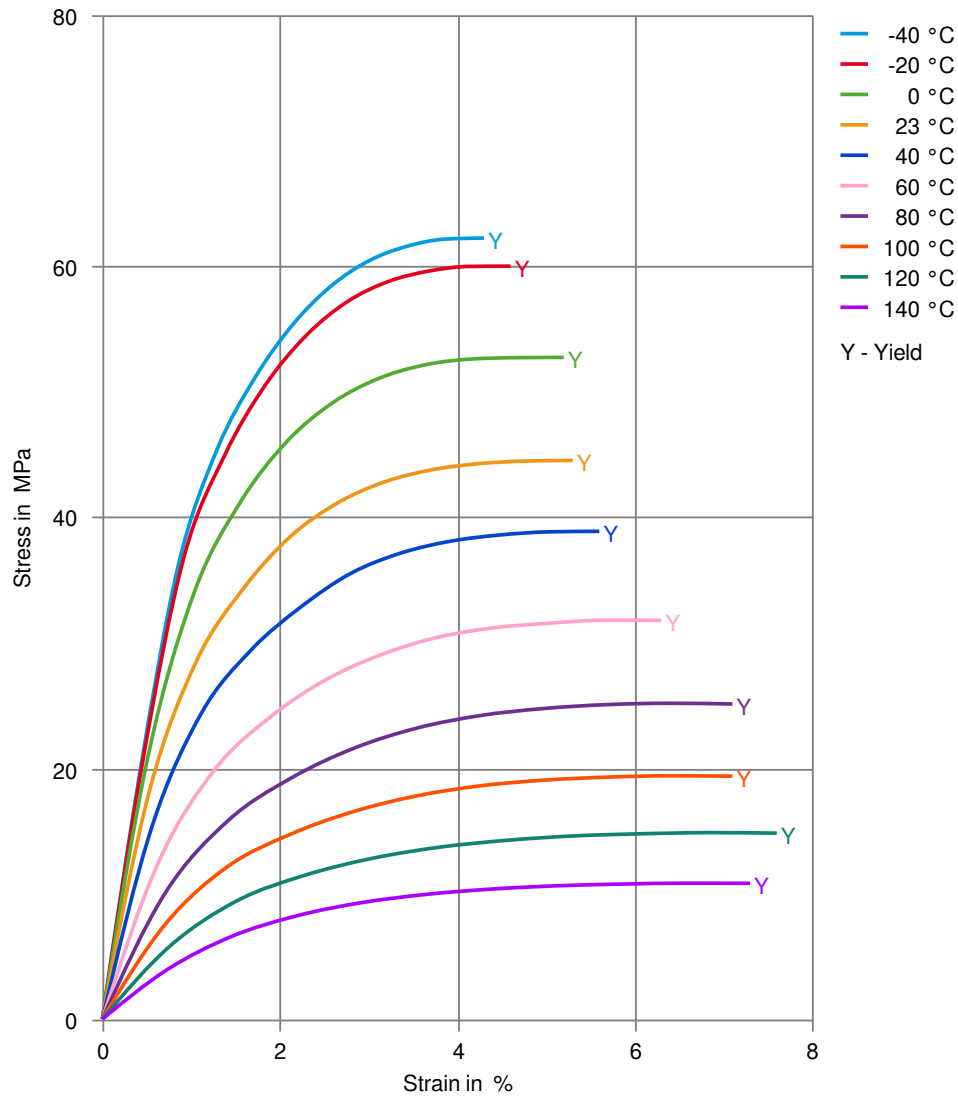
Shearstress-shear rate



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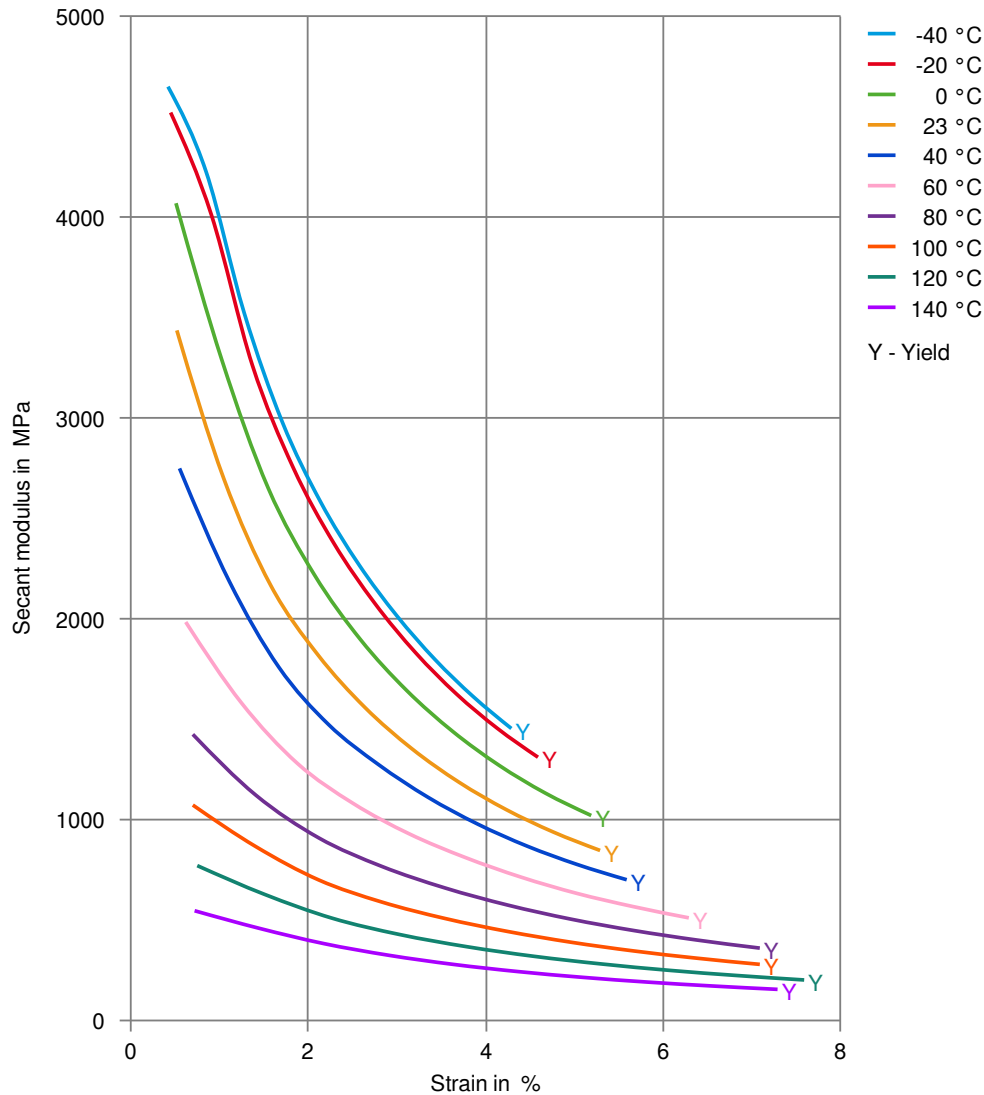
Stress-strain



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Secant modulus-strain



Printed: 2025-03-24

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Revised: 2024-07-16 Source: Celanese Materials Database

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