

Injection molding type like C 9021, with (R) GUR (PE-UHMW) modified

Chemical abbreviation according to ISO 1043-1: POM Molding compound ISO 29988- POM-K, M-GNS, 02-002 POM copolymer Injection molding type with (R) GUR (PE-UHMW) modified; good chemical resistance to solvents, fuel and strong alkalis as well as good hydrolysis resistance; high resistance to thermal and oxidative degradation. Burning rate ISO 3795 and FMVSS 302 < 100 mm/min for a thickness more than 1 mm. Ranges of applications: for parts under abrasion stress. FMVSS = Federal Motor Vehicle Safety Standard (USA)

Rheological properties

Melt volume-flow rate Temperature Load Moulding shrinkage, parallel Moulding shrinkage, normal	5.5 190 2.16 2.3 1.8	kg %	ISO 1133 ISO 294-4, 2577 ISO 294-4, 2577
Typical mechanical properties			
Tensile Modulus Yield stress, 50mm/min Yield strain, 50mm/min Nominal strain at break Flexural Modulus Tensile creep modulus, 1h Tensile creep modulus, 1000h Charpy impact strength, 23°C Charpy impact strength, -30°C Charpy notched impact strength, -30°C Ball indentation hardness, H 358/30	45 9 10 2100 2000 1300 30 30 3.5	MPa MPa % % MPa MPa MPa kJ/m² kJ/m² kJ/m² kJ/m²	ISO 527-1/-2 ISO 527-1/-2 ISO 527-1/-2 ISO 527-1/-2 ISO 178 ISO 899-1 ISO 179/1eU ISO 179/1eU ISO 179/1eA ISO 2039-1
Thermal properties			
Melting temperature, 10°C/min Temp. of deflection under load, 1.8 MPa Vicat softening temperature, 50°C/h, 50N Coeff. of linear therm. expansion, parallel	140	°C	ISO 11357-1/-3 ISO 75-1/-2 ISO 306 ISO 11359-1/-2
Electrical properties			
Relative permittivity, 100Hz Relative permittivity, 1MHz Dissipation factor, 100Hz Dissipation factor, 1MHz Volume resistivity Surface resistivity Electric strength Comparative tracking index	70 1E12 1E14	E-4 E-4 Ohm.m Ohm kV/mm PLC	IEC 62631-2-1 IEC 62631-2-1 IEC 62631-2-1 IEC 62631-2-1 IEC 62631-3-1 IEC 62631-3-2 IEC 60243-1 UL 746A

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Other properties

Humidity absorption, 2mm	0.2 %	Sim. to ISO 62	
Water absorption, 2mm	0.8 %	Sim. to ISO 62	
Density	1340 kg/m ³	ISO 1183	

Injection

Drying Temperature	100 - 120 °C
Drying Time, Dehumidified Dryer	3 - 4 h
Processing Moisture Content	0.15 %
Screw tangential speed	0.2 - 0.21 m/s
Max. mould temperature	80 - 120 °C
Back pressure	2 MPa
Injection speed	slow

Characteristics

Additives Release agent

Additional information

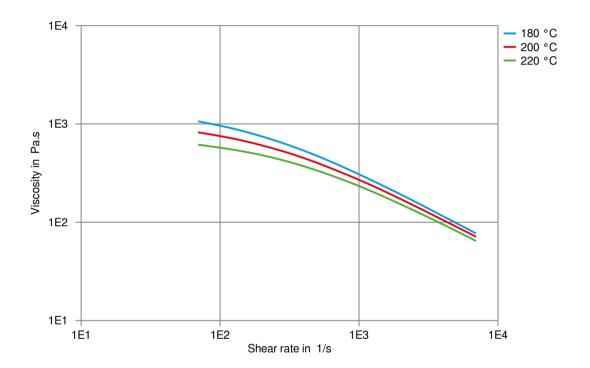
Injection molding Standard injection moulding machines with three phase (15 to 25 D)

plasticating screws will fit.

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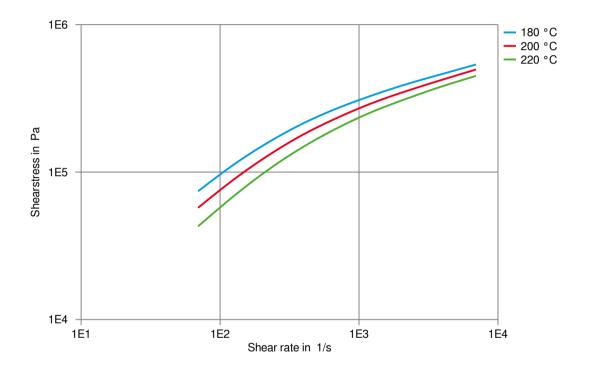
Viscosity-shear rate



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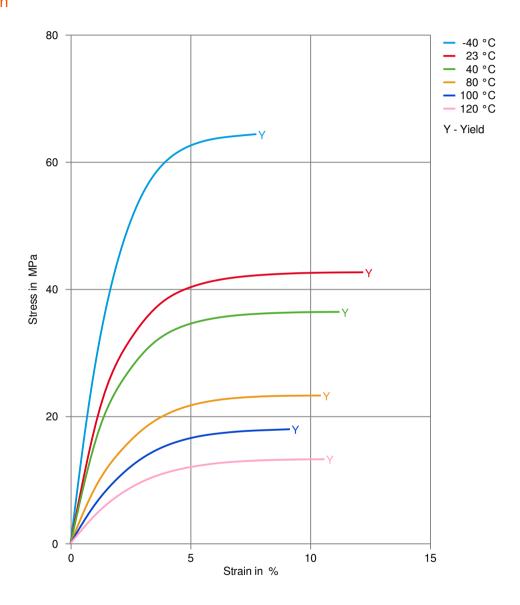
Shearstress-shear rate



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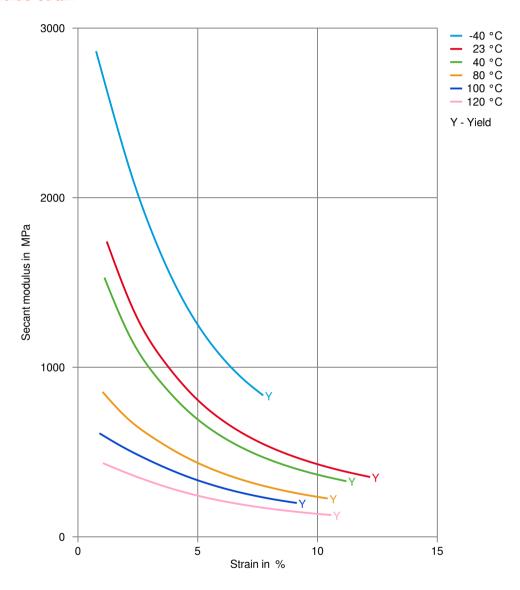
Stress-strain



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Secant modulus-strain



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Processing Texts

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.

Longer pre-drying times/storage The product can then be stored in standard conditions until processed.

Injection molding Standard injection moulding machines with three phase (15 to 25 D)

plasticating screws will fit.

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 $^{\circ}\text{C}\,/\,\text{max}.$ 40 mm

layer / 3 to 6 hours) is recommended.

Max. Water content 0,2 %

Injection molding Postprocessing Conditioning e.g. moisturizing is not necessary.

Other Approvals

Other Approvals

OEM	Specification	Additional Information
Bosch	N28 BN22-X013	Natural

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Revised: 2023-05-21 Source: Celanese Materials Database

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