

Makrolon® GF9002

PC-GF10

Covestro Deutschland AG

- MVR (300 °C/1.2 kg) 15 cm³/10 min
- 10 % glass fiber reinforced
- flame retardant
- UL 94V-0/1.2 mm
- low viscosity
- easy release
- electrical/electronic
- housing parts with low wall thickness

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	15	cm³/10min	ISO 1133
Temperature	300	°C	-
Load	1.2	kg	-
Molding shrinkage, parallel	0.5	%	ISO 294-4, 2577
Molding shrinkage, normal	0.5	%	ISO 294-4, 2577

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	3900	MPa	ISO 527
Stress at Break	45	MPa	ISO 527
Strain at Break	10	%	ISO 527
Impact Strength (Charpy), +23 °C	100	kJ/m²	ISO 179/1eU
Impact Strength (Charpy), -30 °C	40	kJ/m²	ISO 179/1eU
Puncture - maximum force, +23 °C	3200	N	ISO 6603-2
Puncture energy, +23 °C	16	J	ISO 6603-2

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	132	°C	ISO 75-1/-2
Vicat softening temperature, 50 °C/h 50N	141	°C	ISO 306
Coeff. of Linear Therm. Expansion, parallel	40	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	60	E-6/K	ISO 11359-1/-2
Burning Behav. at thickness h	V-0	class	UL 94
Thickness tested	1.2	mm	-
Oxygen index	37	%	ISO 4589-1/-2

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	3.2	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.2	-	IEC 62631-2-1
Dissipation Factor, 100Hz	10	E-4	IEC 62631-2-1
Dissipation Factor, 1MHz	90	E-4	IEC 62631-2-1
Volume Resistivity	>1E13	Ohm*m	IEC 62631-3-1
Surface Resistivity	>1E15	Ohm	IEC 62631-3-2
Electric Strength	36	kV/mm	IEC 60243-1
Comparative tracking index	175	-	IEC 60112

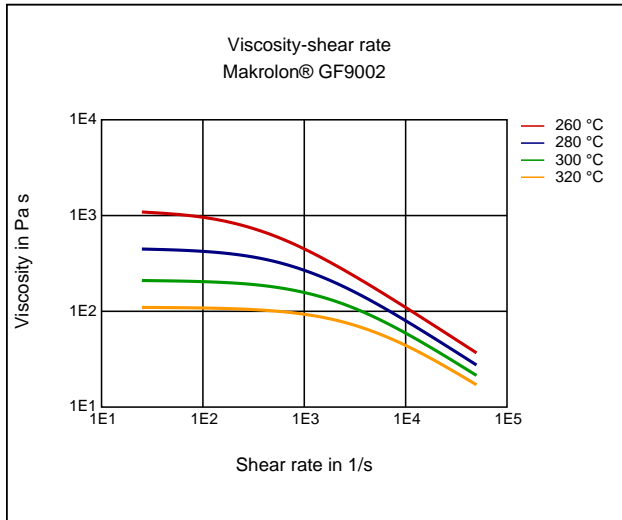
Other Properties	Value	Unit	Test Standard
ISO Data			
Water Absorption	0.3	%	Sim. to ISO 62
Humidity absorption	0.1	%	Sim. to ISO 62
Density	1270	kg/m³	ISO 1183

Test specimen production	Value	Unit	Test Standard
ISO Data			
Injection Molding, melt temperature	300	°C	ISO 294
Injection Molding, mold temperature	110	°C	ISO 294
Injection Molding, injection velocity	200	mm/s	ISO 294

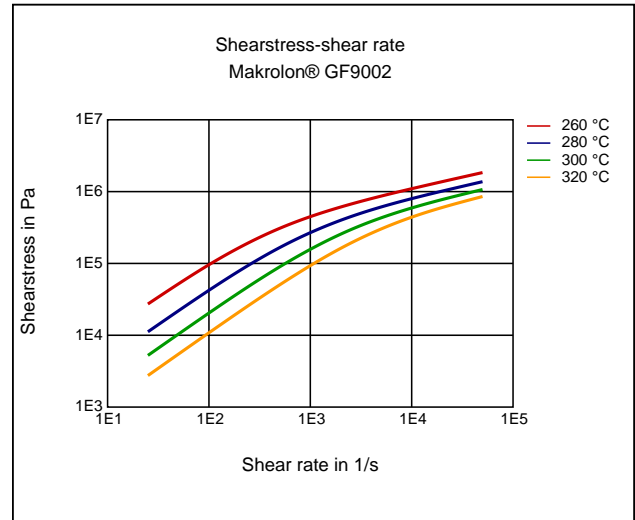
Processing Recommendation Injection Molding	Value	Unit	Test Standard
Pre-drying - Temperature	120	°C	-
Pre-drying - Time	2 - 3	h	-
Processing humidity	≤0.02	%	-
Melt temperature	310 - 330	°C	-
Mold temperature	80 - 130	°C	-

Diagrams

Viscosity-shear rate



Shearstress-shear rate



Characteristics

Processing

Injection Molding

Additives

Release agent

Delivery form

Pellets

Injection Molding

PREPROCESSING

Max. Water content: 0.01 - 0.02 %

Drying temperature: 120 °C

Drying time:

Circulating air drying oven (50 % fresh air) 4-8 h

Fresh air dryer (high speed dryer) 2-4 h

Dry air dryer 2-3 h

PROCESSING

Melt temperature: 310-330 °C

Mold temperature: 80-130 °C

Use open nozzle.

Disclaimer

Liability Exclusion

These guide values are measured and provided by the product manufacturer and have been determined on standardised test specimens and can be affected by pigmentation, mould design and processing conditions. M-Base has taken the guide values from the producer's original Technical Data Sheet. **ALBIS AND M-BASE ARE THEREFORE NOT RESPONSIBLE FOR THE ACCURACY OF THE GUIDE VALUES AND CANNOT GIVE ANY WARRANTY WITH REGARD TO THEIR CORRECTNESS.**

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