Makrolon® GF8001

PC-GF20

Covestro Deutschland AG

- MVR (300 °C/1.2 kg) 16 cm^3/10 min
- 20 % glass fiber reinforced
- low viscosity
- easy release
- available in opaque colors only
- housing parts

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	16	cm³/10min	ISO 1133
Temperature	300	°C	-
Load	1.2	kg	-
Molding shrinkage, parallel	0.2	%	ISO 294-4, 2577
Molding shrinkage, normal	0.5	%	ISO 294-4, 2577

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	6000	MPa	ISO 527
Stress at Break	105	MPa	ISO 527
Strain at Break	3	%	ISO 527
Puncture - maximum force, +23°C	700	N	ISO 6603-2
Puncture energy, +23°C	2.7	J	ISO 6603-2

Thermal Properties	Value	Unit	Test Standard
ISO Data			
Temp. of deflection under load (1.80 MPa)	137	°C	ISO 75-1/-2
Temp. of deflection under load (0.45 MPa)	141	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	144	°C	ISO 306
Coeff. of Linear Therm. Expansion, parallel	26	E-6/K	ISO 11359-1/-2
Coeff. of Linear Therm. Expansion, normal	63	E-6/K	ISO 11359-1/-2
Oxygen index	32	%	ISO 4589-1/-2

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Relative permittivity, 100Hz	3.3	-	IEC 62631-2-1
Relative permittivity, 1MHz	3.3	-	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	0.28	%	Sim. to ISO 62
Humidity absorption	0.1	%	Sim. to ISO 62
Density	1340	kg/m³	ISO 1183

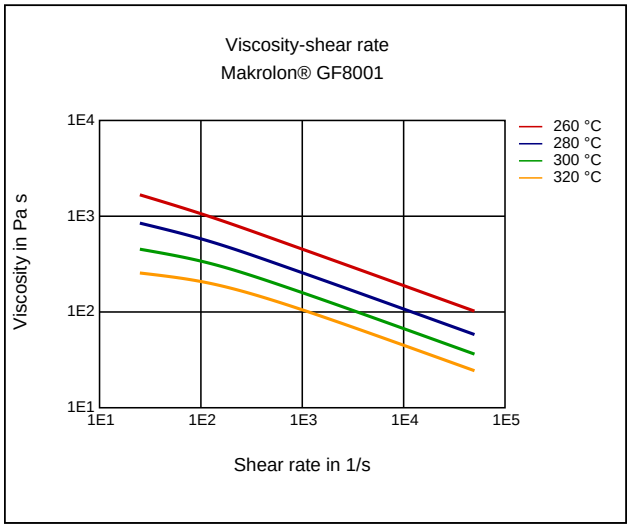
Rheological calculation properties	Value	Unit	Test Standard
ISO Data			
Density of melt	1140	kg/m³	-
Thermal Conductivity of Melt	0.255	W/(m K)	-
Spec. heat capacity of melt	1820	J/(kg K)	-
Eff. thermal diffusivity	1.23E-7	m²/s	-
Ejection temperature	140	°C	-

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

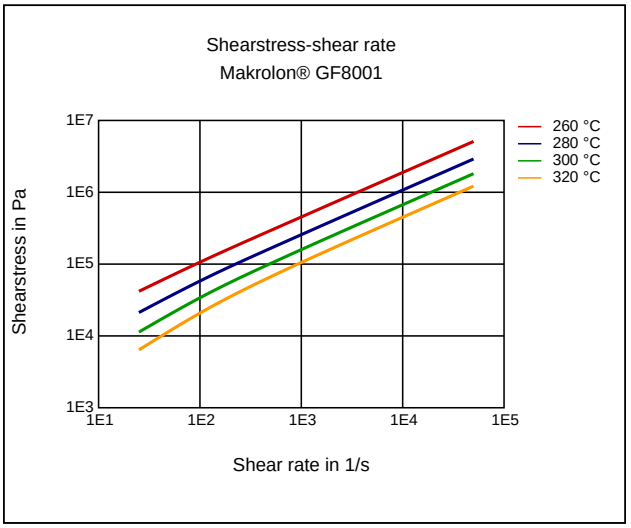
Injection Molding, injection velocity	200	mm/s	ISO 294

Diagrams

Viscosity-shear rate



Shearstress-shear rate



Characteristics

Processing
Injection Molding

Additives
Release agent

Delivery form
Pellets

Special Characteristics
Opaque

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

Important: irrespective of product type or designation, ALBIS does not recommend or support the use of any products it supplies which fall into the following medical, pharmaceutical or diagnostic application categories:

- risk class III applications according to EU directive 93/42/EEC
- any bodily implant application for greater than 30 days
- any critical component in any medical device that supports or sustains human life.

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