Makrolon® 9417

PC-GF10 — Covestro Deutschland AG

Product Texts

- MVR (300 °C/1.2 kg) 6.0 cm³/10 min
- 10 % glass fiber reinforced
- flame retardant
- UL 94V-0/1.5 mm and 5VA/3.0 mm
- high viscosity
- UV stabilized
- easy release

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
[C] Melt volume-flow rate, MVR	**6**	cm³/10min	ISO 1133
Temperature	**300**	°C	-
Load	**1.2**	kg	-
[C] Molding shrinkage, parallel	**0.6**	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**0.5**	%	ISO 294-4, 2577

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**3800**	MPa	ISO 527
[C] Stress at break	**45**	MPa	ISO 527
[C] Strain at break	**15**	%	ISO 527
[C] Tensile creep modulus, 1h	**3600**	MPa	ISO 899-1
[C] Tensile creep modulus, 1000h	**2900**	MPa	ISO 899-1
[C] Charpy impact strength, +23°C	**150**	kJ/m²	ISO 179/1eU
[C] Charpy impact strength, -30°C	**120**	kJ/m²	ISO 179/1eU
[C] Puncture - maximum force, +23°C	**4000**	N	ISO 6603-2
[C] Puncture - maximum force, -30°C	**3700**	N	ISO 6603-2
[C] Puncture energy, +23°C	**25**	J	ISO 6603-2
[C] Puncture energy, -30°C	**15**	J	ISO 6603-2

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
[C] Temp. of deflection under load, 1.80 MPa	**135**	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	**141**	°C	ISO 75-1/-2
[C] Vicat softening temperature, B	**143**	°C	ISO 306
[C] Coeff. of linear therm. expansion, parallel	**40**	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	**65**	E-6/K	ISO 11359-1/-2
[C] Burning Behav. at 1.5 mm nom. thickn.	**V-0**	class	IEC 60695-11-10
Thickness tested	**1.5**	mm	-
[C] Burning Behav. 5V at thickness h	**5VA**	class	IEC 60695-11-20
Thickness tested	**3.0**	mm	-
[C] Oxygen index	**35**	%	ISO 4589-1/-2

[C]: CAMPUS

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

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
[C] Water absorption	**0.26**	%	Sim. to ISO 62
[C] Humidity absorption	**0.1**	%	Sim. to ISO 62
[C] Density	**1270**	kg/m³	ISO 1183

[C]: CAMPUS

Test specimen production	Value	Unit	Test Standard
ISO Data			
[C] 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

[C]: CAMPUS

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	-

Characteristics

Processing
Injection Molding, Other Extrusion

Delivery form
Pellets

Additives
Release agent

Special Characteristics
Flame retardant, Light stabilized or stable to light, U.V. stabilized or stable to weather

Regional Availability
North America, Europe, Asia Pacific, South and Central America, Near East/Africa

Other text information

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.