

Makrolon® GF9415

PC-GF10 FR

Covestro Deutschland AG

- 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
- easy release

Rheological properties	Value	Unit	Test Standard
ISO Data			
Melt volume-flow rate, MVR	6	cm³/10min	ISO 1133
Temperature	300	°C	-
Load	1.2	kg	-
Molding shrinkage, parallel	0.7	%	ISO 294-4, 2577
Molding shrinkage, normal	0.5	%	ISO 294-4, 2577

Mechanical Properties	Value	Unit	Test Standard
ISO Data			
Tensile Modulus	3800	MPa	ISO 527
Stress at Break	45	MPa	ISO 527
Strain at Break	15	%	ISO 527
Impact Strength (Charpy), +23°C	150	kJ/m²	ISO 179/1eU
Type of failure	C	-	-
Puncture - maximum force, +23°C	3900	N	ISO 6603-2
Puncture - maximum force, -30°C	3700	N	ISO 6603-2
Puncture energy, +23°C	25	J	ISO 6603-2
Puncture energy, -30°C	15	J	ISO 6603-2
Flexural Modulus (23°C)	3600	MPa	ISO 178
Flexural strength	5.8	MPa	ISO 178
Notched Impact Strength (Izod), 23°C	10	kJ/m²	ISO 180/1A
Notched Impact Strength (Izod)	6	kJ/m²	ISO 180/1A
Temperature	-30	°C	-

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)	145	°C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	145	°C	ISO 306
Burning Behav. at 1.5 mm Nom. Thicken.	V-0	class	UL 94
Burning Behav. at thickness h	V-2	class	UL 94
Thickness tested	0.8	mm	-
Burning Behav. 5V at Thickness h	5VA	class	IEC 60695-11-20
Thickness tested	3.0	mm	-
Oxygen index	35	%	ISO 4589-1/-2
Glow Wire (GWFI, Flammability Index)	960	°C	IEC 60695-2-12
GWFI - thickness tested (1)	0.75	mm	-
Glow Wire (GWFI, Flammability Index)	960	°C	IEC 60695-2-12
GWFI - thickness tested (2)	1.5	mm	-
Glow Wire (GWFI, Flammability Index)	960	°C	IEC 60695-2-12
GWFI - thickness tested (3)	3	mm	-
Glow Wire Ignition Temperature	825	°C	IEC 60695-2-13
GWIT - thickness tested (1)	0.75	mm	-
Glow Wire Ignition Temperature	850	°C	IEC 60695-2-13
GWIT - thickness tested (2)	1.5	mm	-
Glow Wire Ignition Temperature	850	°C	IEC 60695-2-13
GWIT - thickness tested (3)	3	mm	-

Electrical Properties	Value	Unit	Test Standard
ISO Data			
Volume Resistivity	>1E13	Ohm*m	IEC 62631-3-1
Surface Resistivity	1E15	Ohm	IEC 62631-3-2
Electric Strength	37	kV/mm	IEC 60243-1
Comparative tracking index	175	-	IEC 60112

Other Properties	Value	Unit	Test Standard
ISO Data			
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	-
Melt temperature	280 - 320	°C	-
Mold temperature	110	°C	-

Characteristics

Processing

Injection Molding

Special Characteristics

Flame retardant, Opaque

Additives

Release agent

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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