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. Thickn.	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