

Makrolon® EM9417

/ MVR (300 °C/1.2 kg) 6.0 cm³/10 min; 10 % glass fiber reinforced; flame retardant; high viscosity; UV stabilized; easy release; injection molding - melt temperature 310 - 330 °C; available in opaque colors only

ISO Shortname

Property	Test Condition	Unit	Standard	typical Value
Rheological properties				
C Melt volume-flow rate	300 °C; 1.2 kg	cm ³ /10 min	ISO 1133	6.0
C Molding shrinkage, parallel	60x60x2 mm; 500 bar	%	ISO 294-4	0.6
C Molding shrinkage, normal	60x60x2 mm; 500 bar	%	ISO 294-4	0.5
Molding shrinkage, parallel/normal	Value range based on general practical experience	%	b.o. ISO 2577	0.4 - 0.6
Mechanical properties (23 °C/50 % r. h.)				
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	3700
Yield stress	5 mm/min	MPa	ISO 527-1,-2	60
Yield strain	5 mm/min	%	ISO 527-1,-2	5
C Stress at break	5 mm/min	MPa	ISO 527-1,-2	45
C Strain at break	5 mm/min	%	ISO 527-1,-2	15
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	75C(N)
Thermal properties				
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	135
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	141
C Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	143
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	144
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.4
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.6
C Burning behavior UL 94 (1.5 mm) [UL recognition]	1.5 mm	Class	UL 94	V-0
C Oxygen index	Method A	%	ISO 4589-2	35
Relative temperature index (Tensile strength) [UL recognition]	1.5 mm	°C	UL 746B	125
Relative temperature index (Tensile impact strength) [UL recognition]	1.5 mm	°C	UL 746B	115
Relative temperature index (Electric strength) [UL recognition]	1.5 mm	°C	UL 746B	125
Glow wire test (GWFI)	1.5 mm	°C	IEC 60695-2-12	960
Electrical properties (23 °C/50 % r. h.)				
C Volume resistivity		Ohm·m	IEC 60093	1E14
C Surface resistivity		Ohm	IEC 60093	1E16
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	175
Other properties (23 °C)				
C Density		kg/m ³	ISO 1183-1	1270
Glass fiber content	Method A	%	b.o. ISO 3451-1	10
Processing conditions for test specimens				
C Injection molding-Melt temperature		°C	ISO 294	300
C Injection molding-Mold temperature		°C	ISO 294	110
C Injection molding-Injection velocity		mm/s	ISO 294	200

C These property characteristics are taken from the CAMPUS plastics data bank and are based on the international catalogue of basic data for plastics according to ISO 10350.

Impact properties: N = non-break, P = partial break, C = complete break



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Disclaimer

Typical value

These values are typical values only. Unless explicitly agreed in written form, they do not constitute a binding material specification or warranted values. Values may be affected by the design of the mold/die, the processing conditions and coloring/pigmentation of the product. Unless specified to the contrary, the property values given have been established on standardized test specimens at room temperature.

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This product is not designated for the manufacture of a medical device or of intermediate products for medical devices (1). [This product is also not designated for Food Contact (2), including drinking water, or cosmetic applications. If the intended use of the product is for the manufacture of a medical device or of intermediate products for medical devices, for Food Contact products or cosmetic applications Covestro must be contacted in advance to provide its agreement to sell such product for such purpose.] Nonetheless, any determination as to whether a product is appropriate for use in a medical device or intermediate products for medical devices, for Food Contact products or cosmetic applications must be made solely by the purchaser of the product without relying upon any representations by Covestro. 1) Please see the "Guidance on Use of Covestro Products in a Medical Application" document. 2) As defined in Commission Regulation (EU) 1935/2004.

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