



Makrolon® FR6002

/ MVR (300 °C/1.2 kg) 18 cm³/10 min; flame retardant; low viscosity; easy release; injection molding - melt temperature 280°C

ISO Shortname ISO 7391-PC,MFR,(,)-18-9

Property	Test Condition	Unit	Standard	typical Value
Rheological properties				
C Melt volume-flow rate	300 °C/ 1.2 kg	cm³/10 min	ISO 1133	18
Molding shrinkage, parallel/normal	Value range based on general practical experience	%	b.o. ISO 2577	0.5-0.7

Mechanical properties (23 °C/50 % r. h.)				
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	2350
C Yield stress	50 mm/min	MPa	ISO 527-1,-2	64
C Yield strain	50 mm/min	%	ISO 527-1,-2	6
C Nominal strain at break	50 mm/min	%	ISO 527-1,-2	> 50
Stress at break	50 mm/min	MPa	ISO 527-1,-2	65
Strain at break	50 mm/min	%	b.o. ISO 527-1,-2	120
C Charpy impact strength	23 °C	kJ/m²	ISO 179/1eU	N
Izod notched impact strength	23 °C/ 3 mm	kJ/m²	ISO 21305/based on ISO 180/A	15P(C)

Thermal properties				
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	124
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	137
C Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	143
C Burning behavior UL 94 [UL recognition]	0.75 mm	Class	UL 94	V-0 (WT, GY, BK)
Burning behavior UL 94 [UL recognition]	1.5 mm	Class	UL 94	V-0 (WT, GY, BK)
Burning behavior UL 94 [UL recognition]	3.0 mm	Class	UL 94	V-0 (WT, GY, BK)
C Oxygen index	Method A	%	ISO 4589-2	> 32
Relative temperature index (Tensile strength)	1.5 mm	°C	UL 746B	120
Relative temperature index (Tensile impact strength)	1.5 mm	°C	UL 746B	110
Relative temperature index (Electric strength)	1.5 mm	°C	UL 746B	120
Glow wire test (GWFI)	0.75 mm	°C	IEC 60695-2-12	960
Glow wire test (GWFI)	1.5 mm	°C	IEC 60695-2-12	960
Glow wire test (GWFI)	3.0 mm	°C	IEC 60695-2-12	960
Glow wire test (GWIT)	0.75 mm	°C	IEC 60695-2-13	850
Glow wire test (GWIT)	1.5 mm	°C	IEC 60695-2-13	850
Glow wire test (GWIT)	3.0 mm	°C	IEC 60695-2-13	930

Electrical properties (23 °C/50 % r. h.)				
C Relative permittivity	100 Hz	-	IEC 60250	3
C Relative permittivity	1 MHz	-	IEC 60250	2,9
C Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	8
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	88
C Volume resistivity		Ohm·m	IEC 60093	1,5E15
C Surface resistivity		Ohm	IEC 60093	4,2E16
C Electrical strength	1 mm	kV/mm	IEC 60243-1	34
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	250-<1
Comparative tracking index CTI M	Solution B	Rating	IEC 60112	125 M-<1

Other properties (23 °C)				
C Density		kg/m³	ISO 1183-1	1200

Processing conditions for test specimens				
C Injection molding - Melt temperature		°C	ISO 294	280
C Injection molding - Mold temperature		°C	ISO 294	80
C Injection molding - Injection velocity		mm/s	ISO 294	200





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Property	Test Condition	Unit	Standard	typical Value
Recommended processing and drying conditions				
Melt temperatures		°C	-	280 - 320
Standard Melt temperature		°C	-	300
Barrel Temperatures - Rear		°C	-	250 - 260
Barrel Temperatures - Middle		°C	-	270 - 280
Barrel Temperatures - Front		°C	-	280 - 290
Barrel Temperatures - Nozzle		°C	-	290 - 300
Mold Temperatures		°C	-	80 - 120
Hold Pressure (% of injection pressure)		%	-	50 - 75
Plastic Back Pressure (specific)		bar	-	50 - 150
Peripheral Screw Speed		m/s	-	0.05 - 0.2
Shot-to-Cylinder Size		%	-	30 - 70
Dry Air Drying Temperature		°C	-	120
Dry Air Drying Time		h	-	2-3
Moisture Content max. (%)		%	-	<= 0,02
Vent Depth		mm	-	0.025 - 0.075

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

