



Makrolon® MD4820

/ medium viscosity; MVR (300 °C/1.2 kg) 10 cm³/10 min; easy release; impact modified; 20 % glass fiber reinforced; improved chemical resistance compared to standard Makrolon grades; housing parts; Information technology

ISO Shortname PC-I-GF20

Property	Test Condition	Unit	Standard	typical Value
Rheological properties				
Melt volume-flow rate	300 °C/ 1.2 kg	cm³/10 min	ISO 1133	10
Molding shrinkage, parallel/normal	Value range based on general practical experience	%	b.o. ISO 2577	0.2 - 0.5

Mechanical properties (23 °C/50 % r. h.)				
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	5700
Yield stress	5 mm/min	MPa	ISO 527-1,-2	82
Yield strain	5 mm/min	%	ISO 527-1,-2	2.4
C Stress at break	5 mm/min	MPa	ISO 527-1,-2	80
C Strain at break	5 mm/min	%	ISO 527-1,-2	2.8
Flexural modulus	2 mm/min	MPa	ISO 178	5430
Flexural strength	2 mm/min	MPa	ISO 178	137
Charpy notched impact strength	23 °C	kJ/m²	ISO 21305/based on ISO 179/1eA	11 C
Charpy notched impact strength	-30 °C	kJ/m²	ISO 21305/based on ISO 179/1eA	7 C
Izod notched impact strength	23 °C	kJ/m²	ISO 21305/based on ISO 180/A	11 C
Izod notched impact strength	-30 °C	kJ/m²	ISO 21305/based on ISO 180/A	7 C
C Puncture impact properties - maximum force	23 °C	N	ISO 6603-2	1000
C Puncture energy	23 °C	J	ISO 6603-2	6

Thermal properties				
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	138
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	143
C Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	144
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	147
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.27
C Coefficient of linear thermal expansion, normal	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.7

Other properties (23 °C)				
C Density		kg/m³	ISO 1183-1	1330

Processing conditions for test specimens				
C Injection molding - Melt temperature		°C	ISO 294	280 - 320
C Injection molding - Mold temperature		°C	ISO 294	80 - 110

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

