

Makroblend UT235 M

/ (PC+PET)-blend, mineral filled, easy flow, low coefficient of linear thermal expansion, easy release, injection molding. Molded parts from UT235M having exceptional dimensional stability.

ISO Shortname

Property	Test Condition	Unit	Standard	typical Value
Rheological properties				
Melt volume-flow rate	270 °C; 5 kg	cm ³ /10 min	ISO 1133	39
Molding shrinkage, parallel	150x105x3 mm; 270 °C / MT 70°C; 600 bar	%	b.o. ISO 2577	0.5 - 0.6
Molding shrinkage, normal	150x105x3 mm; 270 °C / MT 70°C; 600 bar	%	b.o. ISO 2577	0.5 - 0.6
Mechanical properties (23 °C/50 % r. h.)				
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	4500
Yield stress	5 mm/min	MPa	ISO 527-1,-2	68
Yield strain	5 mm/min	%	ISO 527-1,-2	3.5
C Stress at break	5 mm/min	MPa	ISO 527-1,-2	67
C Strain at break	5 mm/min	%	ISO 527-1,-2	4.0
Flexural modulus	2 mm/min	MPa	ISO 178	4650
Flexural strain at flexural strength	2 mm/min	%	ISO 178	5.0
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178	110
Flexural strength	2 mm/min	MPa	ISO 178	115
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	85
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	85
C Puncture maximum force	23 °C	N	ISO 6603-2	4500
C Puncture energy	23 °C	J	ISO 6603-2	36
Izod impact strength	23 °C	kJ/m ²	ISO 180-U	85
Izod impact strength	-30 °C	kJ/m ²	ISO 180-U	85
Thermal properties				
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	114
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	128
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	139
Coefficient of linear thermal expansion, parallel	23 to 85 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.35
Coefficient of linear thermal expansion, transverse	23 to 85 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.37
Other properties (23 °C)				
C Water absorption (saturation value)	Water at 23 °C	%	ISO 62	0.4
C Water absorption (equilibrium value)	23 °C; 50 % r. h.	%	ISO 62	0.2
C Density		kg/m ³	ISO 1183-1	1340
Filler content	Method A	%	b.o. ISO 3451-1	15
Processing conditions for test specimens				
C Injection molding-Melt temperature		°C	ISO 294	270
C Injection molding-Mold temperature		°C	ISO 294	70
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