



Makroblend® UT4045 G

/ (PC+PBT)-blend, 20% Glass fiber reinforced, easy release, injection molding. Makroblend UT4045G offers a high stiffness, excellent chemical resistance, good flowability and exceptional dimensional stability.

ISO Shortname

Property	Test Condition	Unit	Standard	typical Value
Rheological properties				
C Melt volume-flow rate	260 °C; 5 kg	cm ³ /10 min	ISO 1133	30
Molding shrinkage, parallel	150x105x3 mm; 260 °C / MT 80 °C; 600 bar	%	b.o. ISO 2577	0.2 - 0.4
Molding shrinkage, normal	150x105x3 mm; 260 °C / MT 80 °C; 600 bar	%	b.o. ISO 2577	0.5 - 0.7
Molding shrinkage, parallel/normal	Value range based on general practical experience (600bar)	%	b.o. ISO 2577	0.2 - 0.6
Post- shrinkage, parallel/normal	Value range based on general practical experience (1h; 90°C)	%	b.o. ISO 2577	<0.1

Mechanical properties (23 °C/50 % r. h.)

C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	6500
Yield stress	5 mm/min	MPa	ISO 527-1,-2	100
Yield strain	5 mm/min	%	ISO 527-1,-2	3
Nominal strain at break	5 mm/min	%	ISO 527-1,-2	3
C Stress at break	5 mm/min	MPa	ISO 527-1,-2	100
C Strain at break	5 mm/min	%	ISO 527-1,-2	3
Flexural modulus	2 mm/min	MPa	ISO 178	6100
Flexural strain at flexural strength	2 mm/min	%	ISO 178	3
Flexural strength	2 mm/min	MPa	ISO 178	160
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	45
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	40
Izod impact strength	23 °C	kJ/m ²	ISO 180-U	40
Izod impact strength	-30 °C	kJ/m ²	ISO 180-U	35
Izod notched impact strength	23 °C	kJ/m ²	ISO 180-A	6
Izod notched impact strength	-30 °C	kJ/m ²	ISO 180-A	6
Ball indentation hardness		N/mm ²	ISO 2039-1	90

Thermal properties

C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	110
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	130
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	140
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.7
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.35

Electrical properties (23 °C/50 % r. h.)

C Relative permittivity	100 Hz	-	IEC 60250	3.6
C Relative permittivity	1 MHz	-	IEC 60250	0.15
C Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	13
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	144
C Volume resistivity		Ohm·m	IEC 60093	>1E15
C Surface resistivity		Ohm	IEC 60093	>1E17
C Electrical strength	1 mm	kV/mm	IEC 60243-1	33
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	175

Other properties (23 °C)

C Water absorption (saturation value)	Water at 23 °C	%	ISO 62	0.3
C Water absorption (equilibrium value)	23 °C; 50 % r. h.	%	ISO 62	0.15
C Density		kg/m ³	ISO 1183-1	1400
Filler content	Method A	%	b.o. ISO 3451-1	20



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Property	Test Condition	Unit	Standard	typical Value
Processing conditions for test specimens				
C Injection molding-Melt temperature		°C	ISO 294	260
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

