

Makroblend® UT305

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(PC+PET)-blend, easy release, injection molding. Makroblend UT305 offers high heat resistance, good chemical resistance and flowability. Molded parts from UT305 provide a good surface appearance and exceptional dimensional stability, even in high moisture environments.

ISO Shortname

Property	Test Condition	Unit	Standard	typical Value
Rheological properties				
C Melt volume-flow rate	270 °C; 5 kg	cm ³ /10 min	ISO 1133	39
Melt viscosity	1000 s ⁻¹	Pa·s	b.o. ISO 11443-A	210
Molding shrinkage, parallel	150x105x3 mm; 270 °C / MT 70°C	%	b.o. ISO 2577	0.6-0.8
Molding shrinkage, normal	150x105x3 mm; 270 °C / MT 70°C	%	b.o. ISO 2577	0.6-0.8
Post- shrinkage, parallel/normal	Value range based on general practical experience (1h; 90°C)	%	b.o. ISO 2577	0.01-0.1
Mechanical properties (23 °C/50 % r. h.)				
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	2600
C Yield stress	50 mm/min	MPa	ISO 527-1,-2	69
C Yield strain	50 mm/min	%	ISO 527-1,-2	5.4
C Nominal strain at break	50 mm/min	%	ISO 527-1,-2	100
Stress at break	50 mm/min	MPa	ISO 527-1,-2	69
Strain at break	50 mm/min	%	b.o. ISO 527-1,-2	120
Flexural modulus	2 mm/min	MPa	ISO 178	2600
Flexural strain at flexural strength	2 mm/min	%	ISO 178	6.2
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178	80
Flexural strength	2 mm/min	MPa	ISO 178	100
C Charpy impact strength	23 °C	kJ/m ²	ISO 179-1eU	N
C Charpy impact strength	-30 °C	kJ/m ²	ISO 179-1eU	N
C Charpy notched impact strength	23 °C	kJ/m ²	ISO 179-1eA	8
C Charpy notched impact strength	-30 °C	kJ/m ²	ISO 179-1eA	6
C Puncture maximum force	23 °C	N	ISO 6603-2	4600
C Puncture maximum force	-30 °C	N	ISO 6603-2	5800
C Puncture energy	23 °C	J	ISO 6603-2	54
C Puncture energy	-30 °C	J	ISO 6603-2	62
Izod impact strength	23 °C	kJ/m ²	ISO 180-1C	>180P
Izod impact strength	-30 °C	kJ/m ²	ISO 180-1C	>180P
Izod impact strength	23 °C	kJ/m ²	ISO 180-U	N
Izod impact strength	-30 °C	kJ/m ²	ISO 180-U	N
Izod notched impact strength	23 °C	kJ/m ²	ISO 180-A	8
Izod notched impact strength	-30 °C	kJ/m ²	ISO 180-A	8
Thermal properties				
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	109
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
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	0.7
C Burning behavior UL 94 (1.5 mm) [UL recognition]	1.5 mm	Class	UL 94	HB
Relative temperature index (Tensile strength) [UL recognition]		°C	UL 746B	75
Relative temperature index (Tensile impact strength) [UL recognition]		°C	UL 746B	75
Relative temperature index (Electric strength) [UL recognition]		°C	UL 746B	75
Other properties (23 °C)				
C Water absorption (saturation value)	Water at 23 °C	%	ISO 62	0.55
C Water absorption (equilibrium value)	23 °C; 50 % r. h.	%	ISO 62	0.25
C Density		kg/m ³	ISO 1183-1	1240





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Property	Test Condition	Unit	Standard	typical Value
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

