



Makroblend® UT5205

/ (PC+PBT)-blend, impact modified, easy release, injection molding grade. Makroblend UT5205 offers an exceptional low-temperature impact strength, good flowability and excellent chemical resistance. Suitable for metal insert molding.

ISO Shortname PC+PBT-I

Property	Test Condition	Unit	Standard	typical Value
Rheological properties				
C Melt volume-flow rate	260 °C/ 5 kg	cm³/10 min	ISO 1133	21
Molding shrinkage, parallel/normal	Value range based on general practical experience (600bar)	%	b.o. ISO 2577	0.7 - 0.9
Post- shrinkage, parallel/normal	Value range based on general practical experience (1h; 90°C)	%	b.o. ISO 2577	0.1 - 0.2
Mechanical properties (23 °C/50 % r. h.)				
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	2000
C Yield stress	50 mm/min	MPa	ISO 527-1,-2	55
C Yield strain	50 mm/min	%	ISO 527-1,-2	4.5
C Nominal strain at break	50 mm/min	%	ISO 527-1,-2	> 50
Stress at break	50 mm/min	MPa	ISO 527-1,-2	45
Flexural modulus	2 mm/min	MPa	ISO 178	2000
Flexural stress at 3.5 % strain	2 mm/min	MPa	ISO 178	65
Izod notched impact strength	23 °C	kJ/m²	ISO 180-A	60
Izod notched impact strength	-20 °C	kJ/m²	ISO 180-A	45
Thermal properties				
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	75
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	100
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	122
Electrical properties (23 °C/50 % r. h.)				
C Relative permittivity	100 Hz	-	IEC 60250	3.2
C Relative permittivity	1 MHz	-	IEC 60250	3.1
C Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	30
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	150
C Volume resistivity		Ohm-m	IEC 60093	>1E14
C Surface resistivity		Ohm	IEC 60093	>1E15
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	225
C Comparative tracking index CTI M	Solution B	Rating	IEC 60112	100
Other properties (23 °C)				
C Density		kg/m³	ISO 1183-1	1220
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





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Property	Test Condition	Unit	Standard	typical Value
Recommended Processing and Drying Conditions				
Melt Temperatures		°C	-	250 - 270
Standard Melt Temperature		°C	-	260
Barrel Temperatures - Rear		°C	-	245 - 255
Barrel Temperatures - Middle		°C	-	250 - 260
Barrel Temperatures - Front		°C	-	255 - 265
Barrel Temperatures - Nozzle		°C	-	255 - 270
Mold Temperatures		°C	-	60 - 100
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	-	110
Dry Air Drying Time		h	-	2-4
Moisture Content max. (%)		%	-	<= 0,01
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

