



Makroblend® M5005 FR

Preliminary Datasheet / FR grades

(PC+PBT) blend; unreinforced; flame-retardant; UV-stabilized; impact modified; injection molding grade. Good impact strength, dimensional stability and excellent chemical resistance. Manufactured according to GMP, Tested only according to ISO 10993-5 and ISO 10993-10 for contact with uncompromised skin only; for questions regarding biocompatibility we ask for an email inquiry under plastics@covestro.com.

ISO Shortname

PC+PBT-I FR(40)

Property	Test Condition	Unit	Standard	typical Value
Rheological properties				
C Melt volume-flow rate	260 °C/ 5 kg	cm ³ /10 min	ISO 1133	35
Melt viscosity	1000 s ⁻¹ / 260 °C	Pa·s	b.o. ISO 11443-A	260
Molding shrinkage, parallel/normal	Value range based on general practical experience (600bar)	%	b.o. ISO 2577	0.7-0.9
Mechanical properties (23 °C/50 % r. h.)				
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	2300
C Yield stress	50 mm/min	MPa	ISO 527-1,-2	55
C Yield strain	50 mm/min	%	ISO 527-1,-2	4
Nominal strain at break	5 mm/min	%	ISO 527-1,-2	>50
C Stress at break	5 mm/min	MPa	ISO 527-1,-2	45
C Strain at break	5 mm/min	%	ISO 527-1,-2	>50
Flexural modulus	2 mm/min	MPa	ISO 178	2350
Flexural strength	2 mm/min	MPa	ISO 178	85
C Charpy impact strength	23 °C	kJ/m ²	ISO 179/1eU	N
C Charpy notched impact strength	23 °C	kJ/m ²	ISO 179/1eA	50
Izod impact strength	23 °C	kJ/m ²	ISO 180/1C	N
Izod notched impact strength	23 °C	kJ/m ²	ISO 180/A	45
Izod notched impact strength	-30 °C	kJ/m ²	ISO 180/A	13
Thermal properties				
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	77
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	89
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	99
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.9
C Coefficient of linear thermal expansion, normal	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.9
C Burning behavior UL 94 [UL recognition]	2.4 mm	Class	UL 94	V-0
Other properties (23 °C)				
C Density		kg/m ³	ISO 1183-1	1250
Recommended processing and drying conditions				
Standard Melt temperature		°C	-	260
Mold Temperatures		°C	-	70
Dry Air Drying Temperature		°C	-	80
Dry Air Drying Time		h	-	>= 4
Moisture Content max. (%)		%	-	<0.01

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

