

Bayblend® T90 MF-20

Standard grades / Mineral filled

Rubber modified (PC+SAN) blend; 20 % mineral filled; Vicat/B 120 temperature = 130 °C; very good flow; reduced coefficient of thermal expansion; tensile modulus = 4900 MPa; good heat resistance

ISO Shortname

PC+SAN-I-TD20

Property	Test Condition	Unit	Standard	typical Value
Rheological properties				
C Melt volume-flow rate	260 °C/ 5 kg	cm³/10 min	ISO 1133	12
Melt viscosity	1000 s ⁻¹ / 260 °C	Pa·s	b.o. ISO 11443-A	240
Molding shrinkage, parallel	150x105x3 mm/ 260 °C / MT 80 °C	%	b.o. ISO 2577	0.3 - 0.5
Molding shrinkage, normal	150x105x3 mm/ 260 °C / MT 80 °C	%	b.o. ISO 2577	0.25 - 0.45
Mechanical properties (23 °C/50 % r. h.)				
C Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	4900
C Yield stress	50 mm/min	MPa	ISO 527-1,-2	60
C Yield strain	50 mm/min	%	ISO 527-1,-2	3.2
Stress at break	50 mm/min	MPa	ISO 527-1,-2	50
Strain at break	50 mm/min	%	b.o. ISO 527-1,-2	9.0
Izod impact strength	23 °C	kJ/m²	ISO 180-U	70
Izod impact strength	-30 °C	kJ/m²	ISO 180-U	50
Izod notched impact strength	23 °C	kJ/m²	ISO 180-A	20
Izod notched impact strength	-30 °C	kJ/m²	ISO 180-A	6.0
Thermal properties				
C Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	111
C Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	127
C Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	128
Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	130
C Coefficient of linear thermal expansion, parallel	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.4
C Coefficient of linear thermal expansion, transverse	23 to 55 °C	10 ⁻⁴ /K	ISO 11359-1,-2	0.56
C Burning behavior UL 94	0.85 mm	Class	UL 94	HB
Electrical properties (23 °C/50 % r. h.)				
C Relative permittivity	100 Hz	-	IEC 60250	3.3
C Relative permittivity	1 MHz	-	IEC 60250	3.2
C Dissipation factor	100 Hz	10 ⁻⁴	IEC 60250	15
C Dissipation factor	1 MHz	10 ⁻⁴	IEC 60250	32
C Volume resistivity		Ohm·m	IEC 60093	1E14
C Surface resistivity		Ohm	IEC 60093	1E16
C Electrical strength	1 mm	kV/mm	IEC 60243-1	35
C Comparative tracking index CTI	Solution A	Rating	IEC 60112	225
Other properties (23 °C)				
C Water absorption (saturation value)	Water at 23 °C	%	ISO 62	0.5
C Water absorption (equilibrium value)	23 °C; 50 % r. h.	%	ISO 62	0.2
C Density		kg/m³	ISO 1183-1	1290
Processing conditions for test specimens				
C Injection molding-Melt temperature		°C	ISO 294	260
C Injection molding-Mold temperature		°C	ISO 294	80
C Injection molding-Injection velocity		mm/s	ISO 294	240

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Property	Test Condition	Unit	Standard	typical Value
Recommended Processing and Drying Conditions				
Melt Temperatures		°C	-	260 - 280
Standard Melt Temperature		°C	-	270
Barrel Temperatures - Rear		°C	-	230 - 240
Barrel Temperatures - Middle		°C	-	235 - 245
Barrel Temperatures - Front		°C	-	240 - 270
Barrel Temperatures - Nozzle		°C	-	265 - 275
Mold Temperatures		°C	-	70 - 90
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	-	95 - 110
Dry Air Drying Time		h	-	4
Moisture Content max. (%)		%	-	<= 0,02
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