Bayblend® T50 PG

Preliminary Datasheet / formely Bayblend® TP2350; ABS+PC-Blend; Vicat/B 120 temperature = 113°C; for electroplating applications

ISO Shortname ABS+PC

	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	200
C	Molding shrinkage, normal	60x60x2 mm/ 260 °C / MT 80 °C/ 500 bar	%	ISO 294-4	0.55-0.75
C	Molding shrinkage, normal	60x60x2 mm/ 260 °C / MT 80 °C/ 500 bar	%	ISO 294-4	0.55-0.75
Mechanical properties (23 °C/50 % r. h.)					
C	Tensile modulus	1 mm/min	MPa	ISO 527-1,-2	1900
C	Yield stress	50 mm/min	MPa	ISO 527-1,-2	47
C	Yield strain	50 mm/min	%	ISO 527-1,-2	4.3
C	Nominal strain at break	50 mm/min	%	ISO 527-1,-2	> 50
	Stress at break	50 mm/min	MPa	ISO 527-1,-2	40
	Izod impact strength	23 °C	kJ/m²	ISO 180/U	N
	Izod impact strength	-30 °C	kJ/m²	ISO 180/U	N
	Izod notched impact strength	23 °C	kJ/m²	ISO 180/A	45
	Izod notched impact strength	-30 °C	kJ/m²	ISO 180/A	45
C	Charpy impact strength	23 °C	kJ/m²	ISO 179/1eU	N
C	Charpy impact strength	-30 °C	kJ/m²	ISO 179/1eU	N
C	Charpy notched impact strength	23 °C	kJ/m²	ISO 179/1eA	50
C	Charpy notched impact strength	-30 °C	kJ/m²	ISO 179/1eA	50
C	Puncture impact properties - maximum force	23 °C	N	ISO 6603-2	3500
C	Puncture impact properties - maximum force	-30 °C	N	ISO 6603-2	4400
C	Puncture energy	23 °C	J	ISO 6603-2	40
C	Puncture energy	-30 °C	J	ISO 6603-2	45
Thermal properties					
C	Temperature of deflection under load	1.80 MPa	°C	ISO 75-1,-2	93
C	Temperature of deflection under load	0.45 MPa	°C	ISO 75-1,-2	114
C	Vicat softening temperature	50 N; 50 °C/h	°C	ISO 306	111
	Vicat softening temperature	50 N; 120 °C/h	°C	ISO 306	113
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
Electrical properties (23 °C/50 % r. h.)					
C	Relative permittivity	100 Hz	-	IEC 60250	2.5
C	Relative permittivity	1 MHz	-	IEC 60250	2.9
C	Dissipation factor	100 Hz	10^{-4}	IEC 60250	30
C	Dissipation factor	1 MHz	10^{-4}	IEC 60250	110
C	Volume resistivity		Ohm·m	IEC 60093	1E16
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	300
Other properties (23 °C)					
C	Water absorption (saturation value)	Water at 23 °C	%	ISO 62	0.7
C	Water absorption (equilibrium value)	23 °C; 50 % r. h.	%	ISO 62	0.2
C	Density		kg/m³	ISO 1183-1	1100

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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	80
C	Injection molding - Injection velocity		mm/s	ISO 294	240
Recommended processing and drying conditions					
	Melt temperatures		°C	-	240-270
	Standard Melt temperature		°C	-	260
	Barrel Temperatures - Rear		°C	-	220-230
	Barrel Temperatures - Middle		°C	-	225-235
	Barrel Temperatures - Front		°C	-	230-240
	Barrel Temperatures - Nozzle		°C	-	255-265
	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

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