Technical Data Sheet

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Badadur® PBT9 GF10/GK20 TM-Z1 WL

PBT-I (GF10+GB20)
High viscosity, with glass fibres and glass beads reinforced injection moulding grade, high toughness

Properties	Test Conditions	Test Methods	Units	Typical Values
Mechanical Properties				
Tensile Modulus [1]	23° C, 1 mm/Min	ISO 527-1/2	MPa	5000
Yield Stress [1]	23° C, 50 mm/Min	ISO 527-1/2	MPa	*
Yield Strain [1]	23° C, 50 mm/Min	ISO 527-1/2	%	*
Nominal Stress at Break [1]	23° C, 50 mm/Min	ISO 527-1/2	%	*
Stress at Break [1]	23° C, 5 mm/Min	ISO 527-1/2	MPa	60
Strain at Break [1]	23° C, 5 mm/Min	ISO 527-1/2	%	7
Bending Strength [2]	23° C	ISO 178	MPa	-
Charpy Impact Strength, unnotched [2]	23° C -30° C	ISO 179/1eU ISO 179/1eU	kJ/m2 kJ/m2	45 45
Notched Charpy Impact Strength [2]	23° C -30° C	ISO 179/1eA ISO 179/1eA	kJ/m2 kJ/m2	8 8
Izod notched Impact Strength [2]	23° C -30° C	ISO 180/1A ISO 180/1A	kJ/m2 kJ/m2	- -
Thermal Properties				
Melting Temperature [3]	10 K/Min	ISO 3146	°C	223
Temperature of Deflection under Load [4]	0,45 MPa 1,8 MPa	ISO 75-1/2 ISO 75-1/2	°C °C	200 185
Coefficient of Linear Thermal Elongation [5]	parallel direction transverse direction	DIN 53752 DIN 53752	E-4/K E-4/K	- -
Maximum Service Temperature	some hours 20 000 h 50 % Decrease in Tensile Strength or Yield Stress	- IEC 216	°C °C	165 135
Flammability [6]	0,8 mm 1,6 mm	UL 94 UL 94	Class Class	HB HB
Glow Wire Test	0,75 mm / 1,6 mm 0,75 mm / 1,6 mm	GWIT GWFI	IEC-60695-2-13 IEC-60695-2-12	- -
Electric Properties				
Relative Permittivity [7]	1 MHz	IEC 250	-	3.6
Dissipation Factor [7]	1 MHz	IEC 250	E-4	-
Specific Volume Resistivity [7]	-	IEC 93	Ohm cm	$>10^{16}$
Specific Surface Resistivity [7]	-	IEC 93	Ohm	$>10^{14}$
Dielectric Strength [7]	-	IEC 243-1	kV/mm	25
Comparative Tracking Index	-	IEC 112	V	375
Other data				
Water Absorption	23° C, Saturation	ISO 62	%	0.35
Moisture Absorption	23° C, 50 % r.H.	ISO 62	%	0.13
Melt Volume Rate (MVR)	250° C/2,16kg	ISO 1133	cm^3/10 min	-
Density	23° C	ISO 1183	g/ccm	1.53
Processing				
Melt Temperature	-	-	°C	240– 265
Tool Surface Temperature	-	-	°C	60 – 100
Drying Temperature	-	-	°C	110 – 130
Drying Time	-	-	h	2 – 4h