



<b>Badadur® PBT8 GF20 FR</b>				
PBT-GF20 FR				
Flame retardant injection moulding grade based on PBT with 20% glass reinforcement				
Properties	Test Conditions	Test Methods	Units	Typical Values
<b>Mechanical Properties</b>				
Tensile Modulus <sup>1</sup>	23° C, 1 mm/Min	ISO 527-1/2	MPa	7 200
Yield Stress <sup>1</sup>	23° C, 50 mm/Min	ISO 527-1/2	MPa	*
Yield Strain <sup>1</sup>	23° C, 50 mm/Min	ISO 527-1/2	%	*
Nominal Stress at Break <sup>1</sup>	23° C, 50 mm/Min	ISO 527-1/2	%	*
Stress at Break <sup>1</sup>	23° C, 5 mm/Min	ISO 527-1/2	MPa	105
Strain at Break <sup>1</sup>	23° C, 5 mm/Min	ISO 527-1/2	%	3,0
Bending Strength <sup>2</sup>	23° C	ISO 178	MPa	165
Charpy Impact Strength, unnotched <sup>2</sup>	23° C	ISO 179/1eU	kJ/m2	35
	-30° C	ISO 179/1eU	kJ/m2	-
Notched Charpy Impact Strength <sup>2</sup>	23° C	ISO 179/1eA	kJ/m2	8
	-30° C	ISO 179/1eA	kJ/m2	-
Izod notched Impact Strength <sup>2</sup>	23° C	ISO 180/1A	kJ/m2	9
	-30° C	ISO 180/1A	kJ/m2	-
<b>Thermal Properties</b>				
Melting Temperature <sup>3</sup>	10 K/Min	ISO 3146	°C	223
Temperature of Deflection under Load <sup>4</sup>	0,45 MPa	ISO 75-1/2	°C	220
	1,8 MPa	ISO 75-1/2	°C	205
Coefficient of Linear Thermal Elongation <sup>5</sup>	parallel direction	DIN 53752	E-4/K	0,4
	transverse direction	DIN 53752	E-4/K	1,0
Maximum Service Temperature	some hours	-	°C	170
	20 000 h 50 % Decrease in Tensile Strength or Yield Stress	IEC 216	°C	140
Flammability <sup>6</sup>	0,8 mm	UL 94	Class	V-0
	1,6 mm	UL 94	Class	V-0
Glow Wire Test	0,75 mm / 1,6 mm	GWIT	IEC-60695-2-13	-
	0,75 mm / 1,6 mm	GWFI	IEC-60695-2-12	960
<b>Electric Properties</b>				
Relative Permittivity <sup>7</sup>	1 MHz	IEC 250	-	3,6
Dissipation Factor <sup>7</sup>	1 MHz	IEC 250	E-4	170
Specific Volume Resistivity <sup>7</sup>	-	IEC 93	Ohm cm	>10 <sup>16</sup>
Specific Surface Resistivity <sup>7</sup>	-	IEC 93	Ohm	>10 <sup>14</sup>
Dielectric Strength <sup>7</sup>	-	IEC 243-1	kV/mm	29
Comparative Tracking Index	-	IEC 112	V	400
<b>Other data</b>				
Water Absorption	23° C, Saturation	ISO 62	%	0,50
Moisture Absorption	23° C, 50 % r.H.	ISO 62	%	0,15
Density	23° C	ISO 1183	g / ccm	1,60
<b>Processing</b>				
Melt Temperature	-	-	°C	245 . 265
Tool Surface Temperature	-	-	°C	60 . 100
Drying Temperature	-	-	°C	110 - 130
Drying Time	-	-	h	2 . 4h

**LEGEND:**

- <sup>1</sup> Test Specimen according to ISO 3167, Type A
- <sup>2</sup> Standard bar (80 x 10 x 4) mm
- <sup>3</sup> Compound for moulding
- <sup>4</sup> Standard bar (110 x 10 x 4) mm
- <sup>5</sup> Specimen ( 10 x 10 x 4) mm
- <sup>6</sup> Standard bar [125 x 13 x 0,8(1,6)] mm
- <sup>7</sup> Bar (80 x 80 x 1) mm
- <sup>8</sup> Specimen ( 15 x 15 x 4) mm

- \* not relevant
- not tested
- NB = No break

These data are typical values and represent the state of our knowledge at issue date. If not otherwise stated, the data is related to uncoloured material. They must not be construed as specification limits or as a guarantee for specific properties. It is the liability of the processor to test the suitability of the material for a specific application.

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