Technical Data Sheet

BADAMID® | B70 GF30 TM-Z2

PA6-I-GF30

Impact resistant modified and glass fibre reinforced injection moulding grade for technical items with very high stiffness and toughness

Properties	Test conditions	Test method	Unit	dry as molded	conditioned 23 °C, 50 % r.F.
Mechanical Properties					
Tensile Modulus	23°C, 1 mm/Min	ISO 527-1/2	MPa	8500	5500
Tensile Strength at yield	23°C, 50 mm/Min	ISO 527-1/2	MPa	-	-
Tensile strain at yield	23°C, 50 mm/Min	ISO 527-1/2	%	-	-
Nominal strain at break	23°C, 50 mm/Min	ISO 527-1/2	%	-	-
Tensile stress at break	23°C, 5 mm/Min	ISO 527-1/2	MPa	130	110
Tensile strain at break	23°C, 5 mm/Min	ISO 527-1/2	%	4	8
Flexural Modulus	23°C	ISO 178	MPa	-	-
Flexural Strength	23°C	ISO 178	MPa	220	190
Charpy Impact Strength	23°C -30°C	ISO 179/1eU ISO 179/1eU	kJ/m² kJ/m²	90 75	100
Charpy Notched Impact Strength	23°C -30°C	ISO 179/1eA ISO 179/1eA	kJ/m² kJ/m²	18 -	32
Izod Notched Impact Strength	23°C -30°C	ISO 180/1A ISO 180/1A	kJ/m² kJ/m²	- -	-
Ball indentation hardness	358 N	ISO 2039-1	MPa	-	-
Thermal Properties					
Melting temperature	10 K/min	ISO 3146	°C	222	
Temperature of deflection under load	0,45 MPa 1,8 MPa 8 MPa	ISO 75-1/2 ISO 75-1/2 ISO 75-1/2	°C °C °C	205 190 -	
Coefficient of linear thermal expansion	parallel across	ISO 11359-2 ISO 11359-2	E-4/K E-4/K	0.23 0.63	
Thermal conductivity	Test plate 2 mm	DIN 52612-1	W/(m*K)	-	
Maximum service temperature (50% decrease in tensile strength)	some hours 20.000 h	IEC-60216 IEC-60216	°C °C	180 90	
Flammability		UL94 UL94 UL94 UL94	Wall thickness mm Rating Wall thickness mm Rating	0.75 HB 1.5 HB	
Glow wire test GWIT		IEC-60695-2-13 IEC-60695-2-13 IEC-60695-2-13 IEC-60695-2-13	Wall thickness mm Temperature °C Wall thickness mm Temperature °C	- - - -	
Glow wire test GWFI		IEC-60695-2-12 IEC-60695-2-12 IEC-60695-2-12 IEC-60695-2-12	Wall thickness mm Temperature °C Wall thickness mm Temperature °C	- - - -	
Electrical Properties					
Relative Permittivity	1 MHz	IEC-62631-2-1	-	3.7	6.7
Dissipation Factor	1 MHz	IEC-62631-2-1	E-4	230	2200
Spec. Volume Resistivity	-	IEC-62631-3-1	Ohm*cm	1.0E15	1.0E12

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Spec. Surface Resistivity	-	IEC-62631-3-2	Ohm	1.0E12	1.0E10
Dielectric Strength	-	IEC-60243-1	kV/mm	-	-
Comparative Tracking Index (CTI)	-	IEC-60112	V	500	-
Other Data					
Water absorption	23°C, Saturation	ISO 62	%	5.9	
Moisture absorption	23°C, 50% r.h.	ISO 62	%	1.9	
Density	23°C	ISO 1183	g/cm³	1.31	
Melt Volume Rate (MVR) 	Value Temperature Test Load	ISO 1133 ISO 1133 ISO 1133	cm³/10min °C kg	- - -	
Viscosity number	0,5% in 96% H2SO4	ISO 307	cm³/g	-	
Processing injection molding					
Melt temperature			°C	270 - 290	
Mold temperature			°C	80 - 90	
Guide Value Moisture			%	< 0.15	
Drying temperature			°C	80	
Guide Value Drying time			h	2 - 4	

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