Technical Data Sheet

Badamid® C70 FR HF

PA66/6 FR HF

Halogen and phosphorus free flame retardant injection molding type i.e. for electrical components

Properties	Test Conditions	Test Methods	Units	Dry as moulded	conditioned 23° C, 50%r.H.
Mechanical Properties					
Modulus of Elasticity, tensile	23° C, 1 mm/Min	ISO 527-1/2	MPa	3700	1500
Yield Stress [1]	23° C, 50 mm/Min	ISO 527-1/2	MPa	85	45
Yield Strain [1]	23° C, 50 mm/Min	ISO 527-1/2	%	5,0	18,0
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	85	45
Strain at Break [1]	23° C, 5 mm/Min	ISO 527-1/2	%	5,0	18,0
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	100 -	KB -
Notched Charpy Impact Strength [2]	23° C -30° C	ISO 179/1eA ISO 179/1eA	KJ/m2 KJ/m2	9 4	35 -
Izod notched Impact Strength [2]	23° C -30° C	ISO 180/1A ISO 180/1A	KJ/m2 KJ/m2	4 -	11 -
Thermal Properties					
Melting Temperature [3]	10 K/Min	ISO 3146	°C	243	*
Temperature of Deflection under Load [4]	0,45 MPa 1,8 MPa	ISO 75-1/2 ISO 75-1/2	°C °C	210 70	* *
Coefficient of Linear Thermal Elongation [5]	längs quer	DIN 53752 DIN 53752	E-4/K E-4/K	0,6- 1,0 0,6- 1,2	* *
Maximum Service Temperature	some hours 20 000 h 50 % Decrease in Tensile Strength or Yield Stress	- IEC 216	°C °C	200 107	* *
Flammability [6]	0,8 mm 1,6 mm	UL 94 UL 94	Class Class	- V-0	* *
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	-	3,9	6,0
Dissipation Factor [7]	1 MHz	IEC 250	E-4	200	3000
Specific Volume Resistivity [7]	-	IEC 93	Ohm cm	10^{13}	10^{9}
Specific Surface Resistivity [7]	-	IEC 93	Ohm	10^{12}	10^{10}
Dielectric Strength [7]	-	IEC 243-1	kV/mm	-	-
Comparative Tracking Index	-	IEC 112	V	500	*
Other data					
Water Absorption	23° C, Saturation	ISO 62	%	8,0- 9,0	*
Moisture Absorption	23° C, 50 % r.H.	ISO 62	%	2,6- 3,2	*
Density	23° C	ISO 1183	g/ccm	1,16	*
Processing					
Melt Temperature	-	-	°C	250- 270	*
Tool Surface Temperature	-	-	°C	60- 80	*
Drying Temperature	-	-	°C	80	*
Drying Time	-	-	h	2 – 4	

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