Technical Data Sheet

Badamid® PA4.6 H

PA46
PA4.6 injection moulding grade; heat stabilized; lubricated

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	3 300	1 000
Yield Stress [1]	23° C, 50 mm/Min	ISO 527-1/2	MPa	100	55
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	%	40	> 50
Stress at Break [1]	23° C, 5 mm/Min	ISO 527-1/2	MPa	*	*
Strain at Break [1]	23° C, 5 mm/Min	ISO 527-1/2	%	*	*
Bending Strength [2]	23° C	ISO 178	MPa	3000	900
Charpy Impact Strength, unnotched [2]	23° C -30° C	ISO 179/1eU ISO 179/1eU	kJ/m2 kJ/m2	nb nb	nb nb
Notched Charpy Impact Strength [2]	23° C -30° C	ISO 179/1eA ISO 179/1eA	kJ/m2 kJ/m2	12 4	45 4
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	295	*
Temperature of Deflection under Load [4]	0.45 MPa 1.8 MPa	ISO 75-1/2 ISO 75-1/2	°C °C	- 190	* *
Coefficient of Linear Thermal Elongation [5]	parallel direction transverse direction	DIN 53752 DIN 53752	E-4/K E-4/K	0.85 1.1	* *
Maximum Service Temperature	some hours 20 000 h 50 % Decrease in Tensile Strength or Yield Stress	- IEC 216	°C °C	- -	* *
Flammability [6]	0.8 mm 1.6 mm	UL 94 UL 94	Class Class	V-2 V-2	* *
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	-	-	
Dissipation Factor [7]	1 MHz	IEC 250	E-4	-	
Specific Volume Resistivity [7]	-	IEC 93	Ohm cm	10 [13]	10 [7]
Specific Surface Resistivity [7]	-	IEC 93	Ohm	-	-
Dielectric Strength [7]	-	IEC 243-1	kV/mm	25	15
Comparative Tracking Index	-	IEC 112	V	400	-
Other data					
Water Absorption	23° C. Saturation	ISO 62	%	*	*
Moisture Absorption	23° C. 50 % r.H.	ISO 62	%	3.7	*
Density	23° C	ISO 1183	g/ccm	1.18	*
Processing					
Melt Temperature	-	-	°C	300 – 320	*
Tool Surface Temperature	-	-	°C	90 – 120	*
Drying Temperature	-	-	°C	80	*
Drying Time	-	-	h	2 – 4	*

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