

Badamid® C70 FR HF

Polyamide 66/6 Copolymer

Bada AG

Message:

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

General Information				
Features	Flame Retardant			
	Halogen Free			
	Low (to None) Phosphorus Content			
Uses	Electrical Parts			
Forms	Pellets			
Processing Method	Injection Molding			
Physical	Dry	Conditioned	Unit	Test Method
Density	1.16	--	g/cm ³	ISO 1183
Water Absorption				ISO 62
Saturation, 23°C	8.0 to 9.0	--	%	
Equilibrium, 23°C, 50% RH	2.6 to 3.2	--	%	
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus (23°C)	3700	1500	MPa	ISO 527-2/1
Tensile Stress				
Yield	--	45.0	MPa	ISO 527-2
Yield ¹	85.0	--	MPa	ISO 527-2/50
Break, 23°C ²	85.0	45.0	MPa	ISO 527-2/5
Tensile Strain				
Yield	--	18	%	ISO 527-2
Yield ³	5.0	--	%	ISO 527-2/50
Break, 23°C ⁴	5.0	18	%	ISO 527-2/5
Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength ⁵				ISO 179/1eA
-30°C	4.0	--	kJ/m ²	
23°C	9.0	35	kJ/m ²	
Charpy Unnotched Impact Strength ⁶ (23°C)				ISO 179/1eU
100 kJ/m ²				
No Break				
Notched Izod Impact Strength ⁷ (23°C)				ISO 180/1A
4.0		11	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature ⁸				

0.45 MPa, Unannealed	210	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	70.0	--	°C	ISO 75-2/A
Melting Temperature (DSC) 9	243	--	°C	ISO 3146
CLTE				DIN 53752
Flow	6.0E-5 to 1.0E-4	--	cm/cm/°C	
Transverse	6.0E-5 to 1.2E-4	--	cm/cm/°C	
Maximum Service Temperature				IEC 216
20000 hrs	107	--	°C	
some hours	200	--	°C	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity ¹⁰	1.0E+12	1.0E+10	ohms	IEC 60093
Volume Resistivity ¹¹	1.0E+13	1.0E+9	ohms·cm	IEC 60093
Relative Permittivity ¹² (1 MHz)	3.90	6.00		IEC 60250
Dissipation Factor ¹³ (1 MHz)	0.020	0.30		IEC 60250
Comparative Tracking Index	500	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Flame Rating ¹⁴ (1.60 mm)	V-0	--		UL 94
Injection	Dry	Unit		
Drying Temperature	80.0		°C	
Drying Time	2.0 to 4.0		hr	
Processing (Melt) Temp	250 to 270		°C	
Mold Temperature	60.0 to 80.0		°C	
NOTE				
1.	Test Specimen according to ISO 3167, Type A			
2.	Test Specimen according to ISO 3167, Type A			
3.	Test Specimen according to ISO 3167, Type A			
4.	Test Specimen according to ISO 3167, Type A			
5.	80x10x4 mm			
6.	80x10x4 mm			
7.	80x10x4 mm			
8.	110x10x4mm			
9.	10 K/min, Compound for moulding			
10.	80x80x1 mm			
11.	80x80x1 mm			
12.	80x80x1 mm			

13.	80x80x1 mm
14.	125x13x1.6 mm

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