

Badalac® ABS 20

Acrylonitrile Butadiene Styrene

Bada AG

Message:

Easy flowing standard injection moulding grade for a wide range of applications, especially for housings

General Information			
Features	Good Flow		
Uses	Housings		
Processing Method	Injection Molding		
Physical	Nominal Value	Unit	Test Method
Density (23°C)	1.04	g/cm ³	ISO 1183
Melt Volume-Flow Rate (MVR) (220°C/10.0 kg)	20.0	cm ³ /10min	ISO 1133
Water Absorption			ISO 62
Saturation, 23°C	1.0	%	
Equilibrium, 23°C, 50% RH	0.22	%	
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus ¹ (23°C)	2300	MPa	ISO 527-2/1
Tensile Stress ² (Yield, 23°C)	45.0	MPa	ISO 527-2/50
Tensile Strain ³ (Yield, 23°C)	2.6	%	ISO 527-2/50
Nominal Tensile Strain at Break ⁴ (23°C)	10	%	ISO 527-2/50
Flexural Stress ⁵ (23°C)	65.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength ⁶			ISO 179/1eA
-30°C	8.0	kJ/m ²	
23°C	22	kJ/m ²	
Charpy Unnotched Impact Strength ⁷			ISO 179/1eU
-30°C	100	kJ/m ²	
23°C	180	kJ/m ²	
Notched Izod Impact Strength ⁸			
-30°C	8.0	kJ/m ²	ISO 180
23°C	21	kJ/m ²	ISO 180/1A
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature ⁹			
0.45 MPa, Unannealed	103	°C	ISO 75-2/B
1.8 MPa, Unannealed	99.0	°C	ISO 75-2/A
Vicat Softening Temperature ¹⁰			
--	105	°C	ISO 306/A50
--	96.0	°C	ISO 306/B50

CLTE - Flow ¹¹	8.0E-5 to 1.1E-4	cm/cm/°C	DIN 53752
Maximum Service Temperature			IEC 216
20000 hrs	80	°C	
some hours	0	°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity ¹²	1.0E+13	ohms	IEC 60093
Volume Resistivity ¹³	1.0E+13	ohms·cm	IEC 60093
Electric Strength ¹⁴	37	kV/mm	IEC 60243-1
Relative Permittivity ¹⁵ (1 MHz)	2.80		IEC 60250
Dissipation Factor ¹⁶ (1 MHz)	7.9E-3		IEC 60250
Flammability	Nominal Value	Unit	Test Method
Flame Rating ¹⁷ (0.800 mm)	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	80.0	°C	
Drying Time	2.0 to 4.0	hr	
Processing (Melt) Temp	220 to 260	°C	
Mold Temperature	30.0 to 60.0	°C	
NOTE			
1.	Test Specimen accordng to ISO 3167, Type A		
2.	Test Specimen accordng to ISO 3167, Type A		
3.	Test Specimen accordng to ISO 3167, Type A		
4.	Test Specimen accordng to ISO 3167, Type A		
5.	80x10x4 mm		
6.	80x10x4 mm		
7.	80x10x4 mm		
8.	80x10x4 mm		
9.	110x10x4 mm		
10.	Compound for moulding		
11.	>=10x10x4 mm		
12.	80x80x1 mm		
13.	80x80x1 mm		
14.	80x80x1 mm		
15.	80x80x1 mm		
16.	80x80x1 mm		
17.	125x13x0.8 mm		

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