

AKROMID® B3 GF 50 black (2939)

Polyamide 6
AKRO-PLASTIC GmbH

Message:

AKROMID® B3 GF 50 black (2939) is a 50% glass fibre reinforced polyamide 6 with very high rigidity and strength
Applications are mainly components in mechanical engineering and in the automotive industry

General Information				
Filler / Reinforcement		Glass Fiber,50% Filler by Weight		
Features		High Rigidity		
		High Strength		
Uses		Engineered Applications		
Appearance		Black		
Resin ID (ISO 1043)		PA6 GF50		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.56	--	g/cm ³	ISO 1183
Spiral Flow	43.0	--	cm	Internal Method
Molding Shrinkage				ISO 294-4
Across Flow	0.90	--	%	
Flow	0.20	--	%	
Water Absorption (Saturation, 23°C)	4.5 to 5.1	--	%	ISO 62
Humidity Absorption - 62% RH (70°C)	1.3 to 1.6	--	%	ISO 1110
Temperature Index				IEC 216
50% Loss of Tensile Strength, 20000 hr	130 to 150	--	°C	
50% Loss of Tensile Strength, 5000 hr	160 to 175	--	°C	
Reinforcement Content	50	--	%	ISO 1172
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness (H 961/30)	270	--	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	17000	10300	MPa	ISO 527-2/1
Tensile Stress (Break)	240	145	MPa	ISO 527-2/5
Tensile Strain (Break)	2.5	4.5	%	ISO 527-2/5
Flexural Modulus ¹	14900	--	MPa	ISO 178
Flexural Stress ²	340	--	MPa	ISO 178
Impact	Dry	Conditioned	Unit	Test Method

Charpy Notched Impact Strength				ISO 179/1eA
-30°C	16	--	kJ/m ²	
23°C	20	26	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	90	--	kJ/m ²	
23°C	100	110	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	220	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	220	--	°C	ISO 75-2/A
8.0 MPa, Unannealed	185	--	°C	ISO 75-2/C
Melting Temperature ³	220	--	°C	DIN EN 11357-1
CLTE				ISO 11359-2
Flow : 23 to 80°C	1.1E-5	--	cm/cm/°C	
Transverse : 23 to 80°C	9.4E-5	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
Surface Resistivity	1.0E+12	1.0E+10	ohms	IEC 60093
Volume Resistivity	1.0E+13	1.0E+10	ohms·cm	IEC 60093
Comparative Tracking Index (Solution A)	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate ⁴ (1.00 mm)	< 100	--	mm/min	FMVSS 302
Flame Rating (1.60 mm)	HB	--		UL 94
Glow Wire Flammability Index (1.60 mm)	650	--	°C	IEC 60695-2-12
NOTE				
1.	2.0 mm/min			
2.	2.0 mm/min			
3.	10 K/min, DSC			
4.	>1 mm			

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