

AKROMID® T1 GF 50 black (3101)

Polyphthalamide
AKRO-PLASTIC GmbH

Message:

AKROMID® T1 GF 50 black (3101) is a 50% glass fibre reinforced polyphthalamide with very high rigidity and strength, as well as high temperature and chemical resistance
Applications are parts with tight dimensional tolerances even under high mechanical load.

General Information				
Filler / Reinforcement		Glass Fiber,50% Filler by Weight		
Features		Good Chemical Resistance		
		Good Dimensional Stability		
		High Heat Resistance		
		High Rigidity		
		High Strength		
Appearance		Black		
Resin ID (ISO 1043)		PPA GF50		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.62	--	g/cm ³	ISO 1183
Spiral Flow	53.0	--	cm	Internal Method
Molding Shrinkage				ISO 294-4
Across Flow	0.70	--	%	
Flow	0.30	--	%	
Humidity Absorption - 62% RH (70°C)	0.90	--	%	ISO 1110
Flexural Strain at Break ¹	2.4	--	%	ISO 178
Temperature Index				IEC 216
50% Loss of Tensile Strength, 20000 hr	150 to 160	--	°C	
50% Loss of Tensile Strength, 5000 hr	170 to 180	--	°C	
Reinforcement Content	50	--	%	ISO 1172
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness (H 961/30)	360	--	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	20000	20000	MPa	ISO 527-2/1
Tensile Stress (Break)	270	255	MPa	ISO 527-2/5
Tensile Strain (Break)	2.0	2.0	%	ISO 527-2/5
Flexural Modulus ²	18000	--	MPa	ISO 178
Flexural Stress ³	380	--	MPa	ISO 178

Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	14	--	kJ/m ²	
23°C	14	--	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	70	--	kJ/m ²	
23°C	90	85	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	310	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	285	--	°C	ISO 75-2/A
8.0 MPa, Unannealed	230	--	°C	ISO 75-2/C
Melting Temperature ⁴	313	--	°C	DIN EN 11357-1
Electrical	Dry	Conditioned	Unit	Test Method
Comparative Tracking Index (Solution A)	600	--	V	IEC 60112
Flammability	Dry	Conditioned	Unit	Test Method
Burning Rate ⁵ (1.00 mm)	< 100	--	mm/min	FMVSS 302
Flame Rating (0.800 mm)	HB	--		UL 94
Glow Wire Flammability Index (1.60 mm)	960	--	°C	IEC 60695-2-12
NOTE				
1.	2 mm/min			
2.	2.0 mm/min			
3.	2.0 mm/min			
4.	10 K/min, DSC			
5.	>1 mm			

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