

AKROMID® S3 GF 50 1 black (3441)

Polyamide 610
AKRO-PLASTIC GmbH

Message:

AKROMID® S3 GF 50 1 black (3441) is a 50% glass fibre reinforced and heat stabilised polyamide 6.10 with very high stiffness and strength as well as lower moisture absorption and high chemical resistance.
Applications are precision parts for apparatus engineering and precision mechanics as well as connectors, housings etc. in the automotive industry.

General Information				
UL YellowCard		E148915-102012843		
Filler / Reinforcement		Glass Fiber,50% Filler by Weight		
Additive		Heat Stabilizer		
Features		Good Chemical Resistance		
		Heat Stabilized		
		High Stiffness		
		High Strength		
		Low Moisture Absorption		
Uses		Automotive Applications		
		Connectors		
		Electrical Housing		
		Engineered Applications		
		Housings		
Appearance		Black		
Resin ID (ISO 1043)		PA610 GF50		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.51	--	g/cm ³	ISO 1183
Spiral Flow	35.0	--	cm	Internal Method
Molding Shrinkage				ISO 294-4
Across Flow	1.0	--	%	
Flow	0.70	--	%	
Humidity Absorption - 62% RH (70°C)	0.90	--	%	ISO 1110
Flexural Strain at Break ¹	3.6	--	%	ISO 178
Reinforcement Content	50	--	%	ISO 1172
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness (H 961/30)	230	--	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	14500	11000	MPa	ISO 527-2/1

Tensile Stress (Break)	200	150	MPa	ISO 527-2/5
Tensile Strain (Break)	3.5	4.5	%	ISO 527-2/5
Flexural Modulus ²	13800	--	MPa	ISO 178
Flexural Stress ³	310	--	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	--	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	110	--	kJ/m ²	
23°C	100	100	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
1.8 MPa, Unannealed	205	--	°C	ISO 75-2/A
8.0 MPa, Unannealed	170	--	°C	ISO 75-2/C
Melting Temperature ⁴	220	--	°C	DIN EN 11357-1
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
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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Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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