

AKROLOY® PA GF 30 natural (3177)

Polyamide 66 + PA 6I/6T

AKRO-PLASTIC GmbH

Message:

AKROLOY® PA GF 30 natural (3177) is a 30% glass fibre reinforced polyamide blend with high stiffness and strength, even in conditioned state. Applications are components with high dimensional stability, independent from moisture content. AKROLOY PA GF 30 is an alternative for aluminium- and zinc diecast alloys.

General Information				
Filler / Reinforcement		Glass Fiber,30% Filler by Weight		
Features		Good Dimensional Stability		
		High Stiffness		
		High Strength		
Uses		Metal Replacement		
Appearance		Natural Color		
Resin ID (ISO 1043)		PA66 + PA6I/6T GF30		
Physical	Dry	Conditioned	Unit	Test Method
Density (23°C)	1.38	--	g/cm ³	ISO 1183
Spiral Flow	76.0	--	cm	Internal Method
Molding Shrinkage				ISO 294-4
Across Flow	0.60	--	%	
Flow	< 0.10	--	%	
Water Absorption (Saturation, 23°C)	4.5 to 5.0	--	%	ISO 62
Humidity Absorption - 62% RH (70°C)	1.6	--	%	ISO 1110
Temperature Index				IEC 216
50% Loss of Tensile Strength, 20000 hr	110 to 130	--	°C	
50% Loss of Tensile Strength, 5000 hr	140 to 150	--	°C	
Reinforcement Content	30	--	%	ISO 1172
Hardness	Dry	Conditioned	Unit	Test Method
Ball Indentation Hardness (H 961/30)	240	--	MPa	ISO 2039-1
Mechanical	Dry	Conditioned	Unit	Test Method
Tensile Modulus	10500	10000	MPa	ISO 527-2/1
Tensile Stress (Break)	210	180	MPa	ISO 527-2/5
Tensile Strain (Break)	3.0	3.0	%	ISO 527-2/5
Flexural Modulus ¹	9300	--	MPa	ISO 178
Flexural Stress ²	265	--	MPa	ISO 178

Impact	Dry	Conditioned	Unit	Test Method
Charpy Notched Impact Strength				ISO 179/1eA
-30°C	10	--	kJ/m ²	
23°C	11	10	kJ/m ²	
Charpy Unnotched Impact Strength				ISO 179/1eU
-30°C	65	--	kJ/m ²	
23°C	80	80	kJ/m ²	
Thermal	Dry	Conditioned	Unit	Test Method
Heat Deflection Temperature				
0.45 MPa, Unannealed	245	--	°C	ISO 75-2/B
1.8 MPa, Unannealed	215	--	°C	ISO 75-2/A
Melting Temperature ³	255	--	°C	DIN EN 11357-1
CLTE				ISO 11359-2
Flow : 23 to 80°C	2.0E-5	--	cm/cm/°C	
Transverse : 23 to 80°C	7.5E-5	--	cm/cm/°C	
Electrical	Dry	Conditioned	Unit	Test Method
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 (0.800 mm)	HB	--		UL 94
NOTE				
1.	2.0 mm/min			
2.	2.0 mm/min			
3.	10 K/min, DSC			
4.	>1 mm			

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