

**Datasheet****Description:**

AKROLOY® PA GF 60 black (2844) is a 60% glass fibre reinforced polyamide blend with very high stiffness and strength, even in conditioned state. This material is listed at UL at 0,8 mm all colors HB.

**Applications**

Applications are components with high dimensional stability, independent from moisture content. AKROLOY PA GF 60 is an alternative for aluminium- and zinc diecast alloys.

Typical values	Test specification	Method	Unit	Value	
				d.a.m.	moist.*

**Mechanical Properties**

Tensile modulus	1 mm/min	ISO 527-2	MPa	22000	20000
Stress at break	5 mm/min	ISO 527-2	MPa	275	210
Strain at break	5 mm/min	ISO 527-2	%	2,5	3,3
Flexural modulus	2 mm/min	ISO 178	MPa	23000	21200
Flexural strength	2 mm/min	ISO 178	MPa	435	370
Charpy impact strength	23°C	ISO 179-1/1eU	kJ/m <sup>2</sup>	90	90
Charpy impact strength	-30°C	ISO 179-1/1eU	kJ/m <sup>2</sup>	95	
Charpy notched impact strength	23°C	ISO 179-1/1eA	kJ/m <sup>2</sup>	18	17
Charpy notched impact strength	-30°C	ISO 179-1/1eA	kJ/m <sup>2</sup>	18	
Ball indentation hardness	961/30	ISO 2039-1	MPa	330	

**Electrical Properties**

Surface resistivity		b.o. IEC 60093	Ohm	1,5E+17	
Comparative tracking index	test solution A	IEC 60112		600	

**Thermal Properties**

Melting temperature	DSC, 10K/min	DIN EN 11357-1	°C	255	
Temp. of deflection under load HDT/A	1,8 MPa	ISO 75	°C	240	
Temp. of deflection under load HDT/B	0,45 MPa	ISO 75	°C	245	
Temp. of deflection under load HDT/C	8 MPa	ISO 75	°C	200	
Coeff. of linear therm. expansion, parallel	23°C - 80°C	ISO 11359-1/2	1,0E-4/K	0,15	
Coeff. of linear therm. expansion, normal	23°C - 80°C	ISO 11359-1/2	1,0E-4/K	0,55	
Temp. index for 50% loss of tens. strength	5.000 Std.	IEC 60216	°C	140 - 150	
Temp. index for 50% loss of tens. strength	20.000 Std.	IEC 60216	°C	110 - 130	

**Flammability**

Wall thickness			mm	0,4	0,8	1,6	2,0	3,2
Flammability		UL 94	class		HB			
Burning rate (< 100 mm/min)	> 1 mm thickness	FMVSS 302		+				

**General Properties**

Density	23°C	ISO 1183	g/cm <sup>3</sup>	1,72	
Content reinforcement/Content Filler		ISO 1172	%	60	
Humidity absorption	70°C, 62% r.h.	ISO 1110	%	1,1	

**Processing**

Flowability	7 x 3,5 mm & **	AKRO	mm	470	
Molding shrinkage	flow	ISO 294-4	%	< 0,3	
Molding shrinkage	transverse	ISO 294-4	%	0,5	

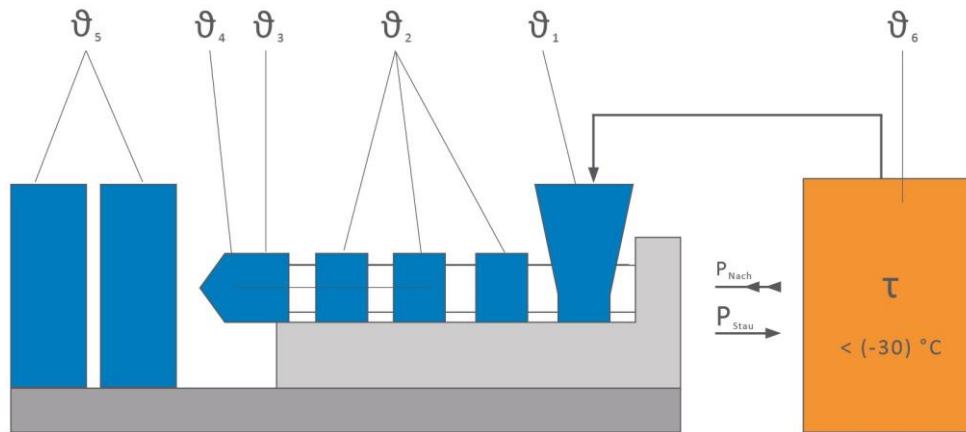
b.o.: based on

\* = specimen acc. ISO 1110 stored

\*\* = mould temperature: 100°C, melt temperature: 320°C, injection pressure: 750 bar

#### Continuation

#### Processing recommendations



$\vartheta_6$ Drying time	h	0 - 4
$\vartheta_6$ Drying temperature	°C	80
Processing moisture	%	0,02 - 0,1
$\vartheta_1$ Feed section	°C	60 - 80
$\vartheta_2$ Section 1 - Section 4	°C	260 - 300
$\vartheta_3$ Nozzle	°C	270 - 300
$\vartheta_4$ Melt	°C	280 - 300
$\vartheta_5$ Mould	°C	90 - 130
$P_{Nach}$ Holding pressure, spec.	bar	300 - 800
$P_{Stau}$ Back pressure, spez.	bar	50 - 150
Injection speed		medium to high
Screw speed	m/min	8 - 15

The listed values are recommendations. Higher values should be used for higher glass loadings. We recommend only de-humidifying or vacuum dryers. Extensive drying can cause filling problems and surface defects.