

AKROLOY®

PA GF 60 7 black (2844)

PA6+PA6I/6T GF60

AKROLOY® PA GF 60 7 black (2844) is a 60% glass fibre reinforced, semi-aromatic polyamide blend with very high stiffness and strength, even in conditioned state. The advanced version of this Product is AKROLOY® PA GF 60 black (6418) with a modern stabilization technology, featuring improved weld-line strength and an even wider process window. UL listed grade.

Regulatory



Properties

Modulus

22.000 MPa

Strength

275 MPa

Impact

90 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

22000 MPa

1 mm/min | conditioned

20000 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

275 MPa

5 mm/min | conditioned

210 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

2,5 %

5 mm/min | conditioned

3,3 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

23000 MPa

2 mm/min | conditioned

21200 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

435 MPa

2 mm/min | conditioned

370 MPa

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

90 kJ/m²

23°C | conditioned

90 kJ/m²

-30°C | d.a.m.

95 kJ/m²

Charpy notched impact strength	23°C d.a.m.	18 kJ/m ²
ISO 179-1/1eA	23°C conditioned	17 kJ/m ²
	-30°C d.a.m.	18 kJ/m ²

Ball indentation hardness	961N/30s d.a.m.	330 MPa
ISO 2039-1		

Thermal Properties

Temperature of deflection under load HDT/A	1,8 MPa	240 °C
ISO 75		

Temperature of deflection under load HDT/B	0,45 MPa	245 °C
ISO 75		

Temperature of deflection under load HDT/C	8 MPa	200 °C
ISO 75		

Melting temperature	DSC, 10K/min	255 °C
ISO 11357-3		

Coefficient of linear thermal expansion	23°C to 80°C parallel	0,15 10 ⁻⁴ /K
ISO 11359-1/2	23°C to 80°C transverse	0,55 10 ⁻⁴ /K

Temperature index for 50% loss of tensile strength	5.000 h	140 - 150 °C
IEC 60216	20.000 h	110 - 130 °C

Flammability

Flammability	UL 0,8 mm Wall thickness	HB Class
UL 94		

Burning rate (<100 mm/min)	> 1 mm Thickness	+
FMVSS 302		

General Properties

Density	23°C	1,72 g/cm ³
ISO 1183		

Humidity absorption	70°C, 62% r.H.	1,1 %
ISO 1110		

Molding shrinkage

ISO 294-4

flow

0,0 - 0,2 %

transverse

0,2 - 0,4 %

Electrical Properties

Surface resistivity

IEC 62631-3-2

d.a.m.

$10^{17} \Omega$

Comparative tracking index

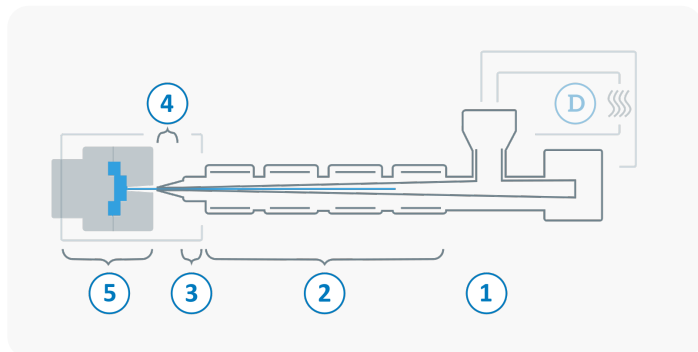
IEC 60112

Test liquid A

600 V

Processing

The values mentioned are recommendations. We only recommend desiccant / dry air dryers or vacuum dryers. Too long a drying time and the resulting residual moisture content below the lower limit can lead to filling problems and surface defects. The specified drying time refers to closed and undamaged bagged material. When processing from previously opened bags or from octabins with polyolefin inliners, a longer drying time may be necessary. It is recommended to check the residual moisture content after the drying process.



D	Drying time	0 - 4 h
	Drying temperature ($\tau \leq -30^{\circ}\text{C}$)	80 °C
	Processing moisture	0,02 - 0,1 %
1	Feed section	60 - 80 °C
2	Temperature Zone 1 - Zone 4	260 - 300 °C
3	Nozzle temperature	270 - 300 °C
4	Melt temperature	280 - 300 °C
5	Mold temperature	90 - 130 °C
→	Holding pressure, spec.	300 - 800 bar
←	Back pressure, spec.	50 - 150 bar
	Injection speed	medium to high
	Screw speed	8 - 15 m/min