

AKROMID®

B3 GF 60 1 black (4644)

PA6 GF60

AKROMID® B3 GF 60 1 black (4644) is a 60% glass fiber reinforced, heat stabilised polyamide 6. It is characterised by an improved flowability compared to a standard PA 6 GF 60. Furthermore, the material impresses with its high stiffness and strength. It is therefore perfectly suitable for technical applications in industrial engineering and in the automotive industry.

Features

heat stabilised 130 easy flow

Properties

Modulus

21.000 MPa

Strength

250 MPa

Impact

90 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

21000 MPa

1 mm/min | conditioned

13500 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

250 MPa

5 mm/min | conditioned

160 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

2,5 %

5 mm/min | conditioned

3,5 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

19000 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

370 MPa

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

90 kJ/m²

23°C | conditioned

95 kJ/m²

-30°C | d.a.m.

90 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

20 kJ/m²

23°C | conditioned

25 kJ/m²

-30°C | d.a.m.

20 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A

ISO 75

1,8 MPa

220 °C

Temperature of deflection under load HDT/B

ISO 75

0,45 MPa

220 °C

Melting temperature

ISO 11357-3

DSC, 10K/min

220 °C

Coefficient of linear thermal expansion

ISO 11359-1/2

23°C to 80°C | parallel

0,13 10⁻⁴/K

23°C to 80°C | transverse

0,60 10⁻⁴/K

Flammability

Flammability

UL 94

0,8 mm Wall thickness

HB Class

GWFI

IEC 60695-2-12

1,6 mm Wall thickness

650 °C

GWIT

IEC 60695-2-13

1,6 mm Wall thickness

675 °C

Burning rate (<100 mm/min)

FMVSS 302

> 1 mm Thickness

+

General Properties

Density

ISO 1183

23°C

1,7 g/cm³

Humidity absorption

ISO 1110

70°C, 62% r.H.

0,9 - 1,2 %

Molding shrinkage

ISO 294-4

flow

0,1 - 0,3 %

transverse

0,3 - 0,5 %

Rheological Properties

Flowability

AKRO

2 mm Thickness

320 mm

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	240 - 290 °C
3	Nozzle temperature	260 - 300 °C
4	Melt temperature	270 - 290 °C
5	Mold temperature	80 - 100 °C
→	Holding pressure, spec.	300 - 800 bar
←	Back pressure, spec.	50 - 150 bar
	Injection speed	medium to high
	Screw speed	8 - 15 m/min

Diagrams

