

AKROMID®

B3 GF 30 1 EN black (5637)

PA6 GF30

AKROMID® B3 GF 30 1 EN black (5637) is a 30% glass fiber reinforced, electrically neutral polyamide 6. It is characterised by a high stiffness and strength. Furthermore, the material is heat stabilised and therefore perfectly suitable for technical parts in industrial engineering and in the automotive industry.

Features

heat stabilised 130

electrically neutral

Properties

Modulus

10.300 MPa

Strength

185 MPa

Impact

95 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

10300 MPa

1 mm/min | conditioned

6200 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

185 MPa

5 mm/min | conditioned

110 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

3 %

5 mm/min | conditioned

5,5 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

8500 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

270 MPa

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

95 kJ/m²

23°C | conditioned

105 kJ/m²

-30°C | d.a.m.

85 kJ/m²

-30°C | conditioned

85 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

13 kJ/m²

23°C | conditioned

18 kJ/m²

-30°C | d.a.m.

12 kJ/m²

-30°C | conditioned

12 kJ/m²

Ball indentation hardness

ISO 2039-1

961N/30s | d.a.m.

230 MPa

Thermal Properties

Temperature of deflection under load HDT/A

ISO 75

1,8 MPa

210 °C

Temperature of deflection under load HDT/B

ISO 75

0,45 MPa

220 °C

Temperature of deflection under load HDT/C

ISO 75

8 MPa

150 °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

0,16 10⁻⁴/K

23°C to 80°C | transverse

0,95 10⁻⁴/K

Flammability

Flammability

UL 94

1,6 mm Wall thickness

HB Class

Burning rate (<100 mm/min)

FMVSS 302

> 1 mm Thickness

+

General Properties

Density

ISO 1183

23°C

1,36 g/cm³

Humidity absorption

ISO 1110

70°C, 62% r.H.

2,1 - 2,3 %

Water absorption

ISO 62

23°C, saturated

6,3 - 6,9 %

Molding shrinkage	flow	0,1 - 0,3 %
ISO 294-4	transverse	0,5 - 0,7 %

Electrical Properties

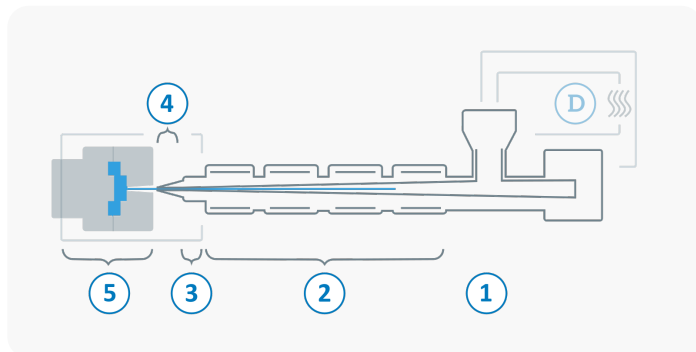
Volume resistivity	d.a.m.	$10^{13} \Omega \times \text{cm}$
IEC 62631-3-1	conditioned	$10^{10} \Omega \times \text{cm}$

Surface resistivity	d.a.m.	$10^{12} \Omega$
IEC 62631-3-2	conditioned	$10^{10} \Omega$

Comparative tracking index	Test liquid A	600 V
IEC 60112		

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