

AKROMID®

B3 GF 30 1 black (20000)

PA6 GF30

AKROMID® B3 GF 30 1 black (20000) is a 30% glass fiber reinforced 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 as well as in the automotive and agricultural machinery industry.

Features

heat stabilised 130

Properties



Mechanical Properties

Tensile modulus ISO 527-2	1 mm/min d.a.m.	9500 MPa
	1 mm/min conditioned	6000 MPa
Tensile stress at break ISO 527-2	5 mm/min d.a.m.	175 MPa
	5 mm/min conditioned	100 MPa
Tensile strain at break ISO 527-2	5 mm/min d.a.m.	3 %
	5 mm/min conditioned	5 %
Flexural modulus ISO 178	2 mm/min d.a.m.	8000 MPa
Flexural strength ISO 178	2 mm/min d.a.m.	260 MPa
Charpy impact strength ISO 179-1/1eU	23°C d.a.m.	90 kJ/m ²
	23°C conditioned	100 kJ/m ²
	-30°C d.a.m.	70 kJ/m ²
Charpy notched impact strength ISO 179-1/1eA	23°C d.a.m.	12 kJ/m ²
	23°C conditioned	17 kJ/m ²
	-30°C d.a.m.	9 kJ/m ²

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

GWFI

IEC 60695-2-12

1,6 mm Wall thickness

650 °C

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

ISO 294-4

flow

0,1 - 0,3 %

transverse

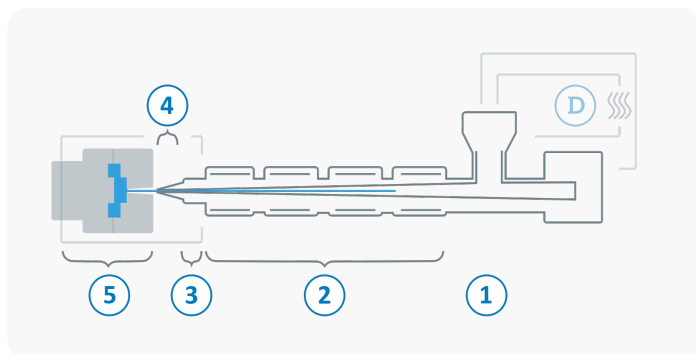
0,5 - 0,7 %

Electrical Properties

Volume resistivity IEC 62631-3-1	d.a.m. conditioned	$10^{13} \Omega \times \text{cm}$ $10^{10} \Omega \times \text{cm}$
Surface resistivity IEC 62631-3-2	d.a.m. conditioned	$10^{12} \Omega$ $10^{10} \Omega$
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	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

