

AKROMID®

A3 GF 30 1 black (2385)

PA66 GF30

AKROMID® A3 GF 30 1 black (2385) is a 30% glass fiber reinforced polyamide 6.6. It is characterised by 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

Properties

Modulus

10.000 MPa

Strength

200 MPa

Impact

85 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

10000 MPa

1 mm/min | conditioned

7100 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

200 MPa

5 mm/min | conditioned

130 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

3 %

5 mm/min | conditioned

>= 6 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

8800 MPa

2 mm/min | conditioned

7200 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

285 MPa

2 mm/min | conditioned

220 MPa

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

85 kJ/m²

23°C | conditioned

95 kJ/m²

-30°C | d.a.m.

80 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

10 kJ/m²

23°C | conditioned

13 kJ/m²

-30°C | d.a.m.

9 kJ/m²

Ball indentation hardness	961N/30s d.a.m.	240 MPa
ISO 2039-1		

Thermal Properties

Temperature of deflection under load HDT/A	1,8 MPa	255 °C
ISO 75		

Temperature of deflection under load HDT/B	0,45 MPa	260 °C
ISO 75		

Temperature of deflection under load HDT/C	8 MPa	210 °C
ISO 75		

Melting temperature	DSC, 10K/min	262 °C
ISO 11357-3		

Coefficient of linear thermal expansion	23°C to 80°C parallel	0,19 10⁻⁴/K
ISO 11359-1/2	23°C to 80°C transverse	0,95 10⁻⁴/K

Temperature index for 50% loss of tensile strength	5.000 h	150 °C
IEC 60216		

Flammability

Flammability	0,8 mm Wall thickness	HB Class
UL 94		

GWFI	1,6 mm Wall thickness	> 650 °C
IEC 60695-2-12		

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

General Properties

Density	23°C	1,36 g/cm³
ISO 1183		

Humidity absorption	70°C, 62% r.H.	1,9 - 2,1 %
ISO 1110		

Water absorption	23°C, saturated	5,2 - 5,8 %
ISO 62		

Molding shrinkage

ISO 294-4

flow

0,1 - 0,3 %

transverse

0,7 - 0,9 %

Electrical Properties

Volume resistivity

IEC 62631-3-1

d.a.m.

$10^{13} \Omega \times \text{cm}$

conditioned

$10^{10} \Omega \times \text{cm}$

Surface resistivity

IEC 62631-3-2

d.a.m.

$10^{12} \Omega$

conditioned

$10^{10} \Omega$

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	260 - 300 °C
3	Nozzle temperature	270 - 310 °C
4	Melt temperature	280 - 300 °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

