

AKROMID®

A3 GF 50 6 black (6860)

PA66 GF50

AKROMID® A3 GF 50 6 black (6860) is a 50% glass fiber reinforced polyamide 6.6. It is characterised by a very high stiffness and strength. Furthermore, the material is anorganically high heat stabilised and therefore perfectly suitable for technical parts in industrial engineering and in the automotive industry, e.g. gearbox components.

Features

heat stabilised 160

Properties

Modulus

18.000 MPa

Strength

250 MPa

Impact

105 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

18000 MPa

1 mm/min | conditioned

14000 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

250 MPa

5 mm/min | conditioned

180 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

2,7 %

5 mm/min | conditioned

3,7 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

105 kJ/m²

23°C | conditioned

110 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

19 kJ/m²

23°C | conditioned

23 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A

ISO 75

1,8 MPa

260 °C

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

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

Flammability

Flammability	1,6 mm Wall thickness	HB Class
UL 94		

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

General Properties

Density	23°C	1,57 g/cm³
ISO 1183		

Humidity absorption	70°C, 62% r.H.	1,3 - 1,5 %
ISO 1110		

Water absorption	23°C, saturated	3,7 - 4,3 %
ISO 62		

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

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

