

AKROMID®

A3 GF 50 4 natural (71090)

PA66 GF50

AKROMID® A3 GF 50 4 natural (71090) is a 50% glass fiber reinforced, high heat stabilised, hydrolysis- and chemical resistant polyamide 6.6 with very high stiffness and strength. It is the official DDPD-free successor of formulation (7109). The material can be used for functional parts in the heating and cooling system. The material has a brownish color.

Features

hydrolysis / chemically stabilised

Properties

Modulus

18.000 MPa

Strength

260 MPa

Impact

110 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.

260 MPa

5 mm/min | conditioned

190 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

3,0 %

5 mm/min | conditioned

4,0 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

110 kJ/m²

23°C | conditioned

115 kJ/m²

Thermal Properties

Melting temperature

ISO 11357-3

DSC, 10K/min

262 °C

Flammability

Burning rate 5V	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		

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