

AKROMID®

B3 GF 50 S1 natural (3694)

PA6-I GF50

AKROMID® B3 GF 50 S1 natural (3694) is a 50% glass fiber reinforced, impact modified Polyamide 6. It is characterised by very high stiffness and strength as well as a higher notched impact strength compared to a standard PA 6 GF 50. The material is therefore perfectly suitable for industrial applications and for housings and covers in the automotive industry. The material has a light inherent color.

Features

impact modified

Properties

Modulus

14.500 MPa

Strength

190 MPa

Impact

110 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

14500 MPa

1 mm/min | conditioned

7800 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

190 MPa

5 mm/min | conditioned

120 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

5 %

5 mm/min | conditioned

8 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

110 kJ/m²

23°C | conditioned

> 110 kJ/m²

-30°C | d.a.m.

100 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

30 kJ/m²

23°C | conditioned

40 kJ/m²

-30°C | d.a.m.

20 kJ/m²

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	225 °C
Melting temperature ISO 11357-3	DSC, 10K/min	222 °C
Temperature index for 50% loss of tensile strength IEC 60216	20.000 h	115 °C

Flammability

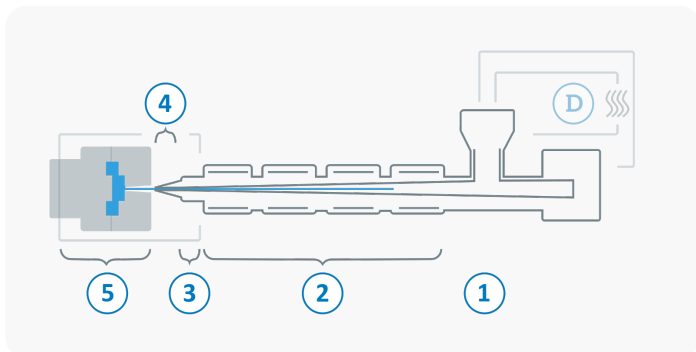
Flammability UL 94	1,6 mm Wall thickness	HB Class
Burning rate (<100 mm/min) FMVSS 302	> 1 mm Thickness	+

General Properties

Density ISO 1183	23°C	1,54 g/cm³
Humidity absorption ISO 1110	70°C, 62% r.H.	1,3 %
Molding shrinkage ISO 294-4	flow	0,1 - 0,3 %
	transverse	0,4 - 0,6 %

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