

AKROMID®

B3 GF 40 black (6077)

PA6 GF40

AKROMID® B3 GF 40 black (6077) is a 40% glass fiber reinforced, heat stabilised polyamide 6. It is characterised by a very high stiffness and strength. The material is perfectly suitable for safety-related parts in the automotive interior.

Properties

Modulus

13.000 MPa

Strength

205 MPa

Impact

110 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

13000 MPa

1 mm/min | conditioned

7800 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

205 MPa

5 mm/min | conditioned

140 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

4 %

5 mm/min | conditioned

7 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

12600 MPa

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

110 kJ/m²

23°C | conditioned

106 kJ/m²

-30°C | d.a.m.

105 kJ/m²

-40°C | d.a.m.

100 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

20 kJ/m²

23°C | conditioned

30 kJ/m²

-30°C | d.a.m.

15 kJ/m²

-40°C | d.a.m.

15 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A ISO 75	1,8 MPa	215 °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	170 °C
Melting temperature ISO 11357-3	DSC, 10K/min	220 °C

Flammability

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

General Properties

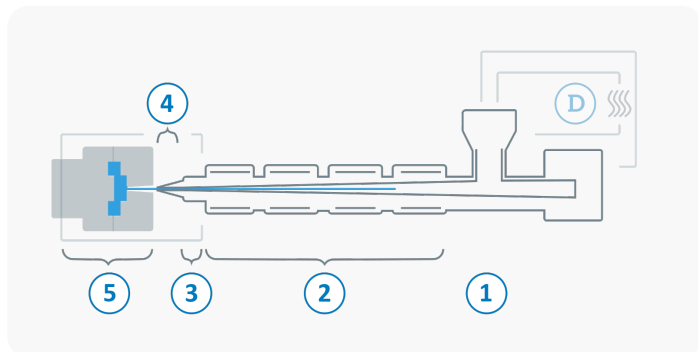
Density ISO 1183	23°C	1,46 g/cm ³
Humidity absorption ISO 1110	70°C, 62% r.H.	1,5 - 1,8 %
Water absorption ISO 62	23°C, saturated	5,4 - 5,6 %
Molding shrinkage ISO 294-4	flow transverse	0,1 - 0,3 % 0,5 - 0,7 %

Electrical Properties

Volume resistivity IEC 62631-3-1	d.a.m. conditioned	10 ¹³ Ω x cm 10 ¹⁰ Ω x cm
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