

AKROMID®

B3 GF 45 1 black (5744)

PA6 GF45

AKROMID® B3 GF 45 1 black (5744) is a 45% glass fibre reinforced, heat stabilised polyamide 6 with very high rigidity and strength

Properties

Modulus

14.000 MPa

Strength

200 MPa

Impact

110 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

14000 MPa

1 mm/min | conditioned

8000 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

200 MPa

5 mm/min | conditioned

140 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

4,5 %

5 mm/min | conditioned

8,5 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

13000 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

315 MPa

Flexural strain at break

ISO 178

2 mm/min | d.a.m.

4,5 %

Charpy impact strength

ISO 179-1/eU

23°C | d.a.m.

110 kJ/m²

23°C | conditioned

110 kJ/m²

-30°C | d.a.m.

95 kJ/m²

Charpy notched impact strength

ISO 179-1/eA

23°C | d.a.m.

22 kJ/m²

23°C | conditioned

25 kJ/m²

-30°C | d.a.m.

18 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A ISO 75	1,8 MPa	200 °C
Temperature of deflection under load HDT/B ISO 75	0,45 MPa	220 °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	1,5 g/cm ³
Molding shrinkage ISO 294-4	flow	0,1 - 0,3 %
	transverse	0,45 - 0,65 %

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

Diagrams

