

AKROMID® PRELIMINARY

B3 GF 40 S1 black (8647)

PA6-I GF40

EXPERIMENTAL GRADE AKROMID® B3 GF 40 S1 black (8647) is a 40% glass fiber reinforced, impact modified polyamide 6. It is characterised by a high cold impact a very high stiffness and strength. The material is perfectly suitable for safety-related parts in the automotive interior. This grade is free of Anilin or benzene.

Features

impact modified reduced density

Properties

Modulus

11.000 MPa

Strength

175 MPa

Impact

105 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

11000 MPa

1 mm/min | conditioned

7200 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

175 MPa

5 mm/min | conditioned

125 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

4,5 %

5 mm/min | conditioned

8 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

105 kJ/m²

23°C | conditioned

125 kJ/m²

-30°C | d.a.m.

120 kJ/m²

-30°C | conditioned

120 kJ/m²

-40°C | d.a.m.

120 kJ/m²

-40°C | conditioned

120 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

26 kJ/m²

23°C | conditioned

38 kJ/m²

-30°C | d.a.m.

20 kJ/m²

-30°C | conditioned

20 kJ/m²

-40°C | d.a.m.

20 kJ/m²

-40°C | conditioned

20 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A

ISO 75

1,8 MPa

205 °C

Melting temperature

ISO 11357-3

DSC, 10K/min

220 °C

Flammability

Flammability

UL 94

1,6 mm Wall thickness

HB Class

General Properties

Density

ISO 1183

23°C

1,42 g/cm³

Humidity absorption

ISO 1110

70°C, 62% r.H.

1,4 - 1,6 %

Water absorption

ISO 62

23°C, saturated

5,4 - 5,6 %

Molding shrinkage

ISO 294-4

flow

0,3 - 0,5 %

transverse

0,7 - 0,9 %

Electrical Properties

Volume resistivity

IEC 62631-3-1

d.a.m.

10¹³ Ω x cm

Rheological Properties

Flowability

AKRO

1 mm Thickness

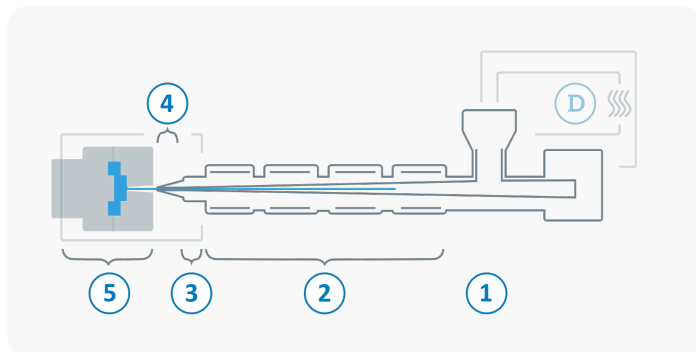
100 mm

2 mm Thickness

310 mm

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

