

AKROMID®

B3 GF 50 RM-M black (3146)

PA6 + X GF50

AKROMID® B3 GF 50 RM-M black (3146) is a 50% glass fiber reinforced polyamide 6. The material is characterised by very high stiffness and strength as well as reduced moisture absorption. As a result, there will be less changes of the mechanical properties. Thus, the material is perfectly suitable for components in the automotive industry with demands for high dimensional stability.

Features

reduced moisture

Properties

Modulus

17.000 MPa

Strength

210 MPa

Impact

70 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

17000 MPa

1 mm/min | conditioned

12000 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

210 MPa

5 mm/min | conditioned

135 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

2,2 %

5 mm/min | conditioned

3 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

17500 MPa

2 mm/min | conditioned

13000 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

320 MPa

2 mm/min | conditioned

220 MPa

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

70 kJ/m²

23°C | conditioned

70 kJ/m²

-30°C | d.a.m.

60 kJ/m²

-30°C | conditioned

60 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

20 kJ/m²

23°C | conditioned

20 kJ/m²

-30°C | d.a.m.

15 kJ/m²

-30°C | conditioned

20 kJ/m²

Ball indentation hardness

ISO 2039-1

961N/30s | d.a.m.

280 MPa

Thermal Properties

Temperature of deflection under load HDT/A

ISO 75

1,8 MPa

215 °C

Temperature of deflection under load HDT/C

ISO 75

8 MPa

165 °C

Melting temperature

ISO 11357-3

DSC, 10K/min

225 °C

Flammability

Flammability

UL 94

0,8 mm Wall thickness

HB Class

GWFI

IEC 60695-2-12

1,6 mm Wall thickness

> 650 °C

GWIT

IEC 60695-2-13

1,6 mm Wall thickness

> 650 °C

Burning rate (<100 mm/min)

FMVSS 302

> 1 mm Thickness

+

General Properties

Density

ISO 1183

23°C

1,62 g/cm³

Humidity absorption

ISO 1110

70°C, 62% r.H.

1,2 %

Molding shrinkage

ISO 294-4

flow

0,1 - 0,3 %

transverse

0,4 - 0,6 %

Electrical Properties

Comparative tracking index

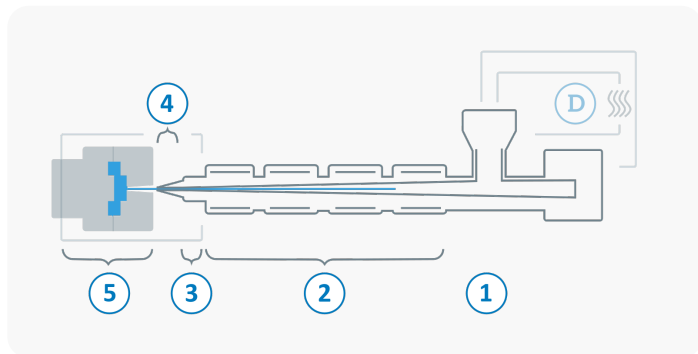
IEC 60112

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	220 - 280 °C
3	Nozzle temperature	240 - 290 °C
4	Melt temperature	240 - 280 °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