

AKROMID®

B3 GF 40 1 L black (4581)

PA6 + PP GF40

AKROMID® B3 GF 40 1 L black (4581) is a PA6/PP-blend with reduced density compared to standard PA6 with 40% glass fibre reinforcement, the material is suitable for components with high strength and stiffness where cost and weight reduction are required at the same time. The chemical resistance of AKROMID® B3 GF 40 1 L black (4581) is particularly superior to calcium chloride (CaCl₂).

Features

heat stabilised 130 reduced density

Properties

Modulus

11.000 MPa

Strength

150 MPa

Impact

70 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

11000 MPa

1 mm/min | conditioned

8400 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

150 MPa

5 mm/min | conditioned

115 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

3,1 %

5 mm/min | conditioned

4,2 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

70 kJ/m²

23°C | conditioned

66 kJ/m²

-30°C | d.a.m.

55 kJ/m²

-30°C | conditioned

55 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

16 kJ/m²

23°C | conditioned

18 kJ/m²

-30°C | d.a.m.

15 kJ/m²

-30°C | conditioned

15 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A ISO 75	1,8 MPa	201 °C
Temperature of deflection under load HDT/B ISO 75	0,45 MPa	217 °C
Melting temperature ISO 11357-3	DSC, 10K/min	220 °C

Flammability

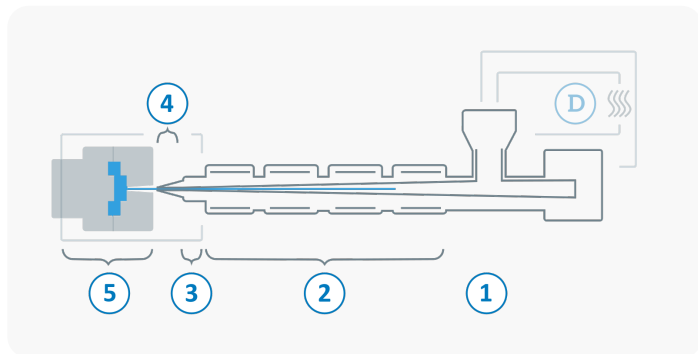
Flammability UL 94	0,8 mm Wall thickness	HB Class
Burning rate (<100 mm/min) FMVSS 302	> 1 mm Thickness	+

General Properties

Density ISO 1183	23°C	1,36 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 %

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 - 290 °C
3	Nozzle temperature	240 - 300 °C
4	Melt temperature	240 - 290 °C
5	Mold temperature	70 - 100 °C
→	Holding pressure, spec.	300 - 800 bar
←	Back pressure, spec.	50 - 150 bar
	Injection speed	medium to high
	Screw speed	5 - 15 m/min

Diagrams

