

AKROMID®

A3 GF 30 1 L black (4436)

PA66+PP GF30

AKROMID® A3 GF 30 1 L black (4436) is a PA6.6-PP-blend with reduced density compared to standard PA66. With 30% 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® A3 GF 30 1 L black (4436) is particularly superior to zinc chloride (ZnCl₂).

Features

heat stabilised 130 reduced density

Properties

Modulus

8.400 MPa

Strength

150 MPa

Impact

77 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

8400 MPa

1 mm/min | conditioned

6700 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

150 MPa

5 mm/min | conditioned

110 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

3 %

5 mm/min | conditioned

4,4 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

8200 MPa

2 mm/min | conditioned

7000 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

220 MPa

2 mm/min | conditioned

175 MPa

Flexural strain at break

ISO 178

2 mm/min | d.a.m.

3,2 %

2 mm/min | conditioned

4 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

77 kJ/m²

23°C | conditioned

70 kJ/m²

-30°C | d.a.m.

73 kJ/m²

Charpy notched impact strength	23°C d.a.m.	15 kJ/m²
ISO 179-1/1eA	23°C conditioned	16 kJ/m²
	-30°C d.a.m.	13 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A	1,8 MPa	246 °C
ISO 75		
Temperature of deflection under load HDT/B	0,45 MPa	260 °C
ISO 75		
Temperature of deflection under load HDT/C	8 MPa	150 °C
ISO 75		
Melting temperature	DSC, 10K/min	262 °C
ISO 11357-3		
Coefficient of linear thermal expansion	23°C to 80°C parallel	0,22 10⁻⁴/K
ISO 11359-1/2	23°C to 80°C transverse	1,18 10⁻⁴/K

Flammability

Flammability	0,8 mm Wall thickness	HB Class
UL 94		
GWFI	0,8 mm Wall thickness	650 °C
IEC 60695-2-12		
GWIT	0,8 mm Wall thickness	675 °C
IEC 60695-2-13		
Burning rate (<100 mm/min)	> 1 mm Thickness	+
FMVSS 302		

General Properties

Density	23°C	1,26 g/cm³
ISO 1183		
Humidity absorption	70°C, 62% r.H.	1,1 - 1,3 %
ISO 1110		

Molding shrinkage

ISO 294-4

flow

0,1 - 0,3 %

transverse

0,6 - 0,8 %

Electrical Properties

Comparative tracking index

IEC 60112

Test liquid A

600 V

Rheological Properties

MVR

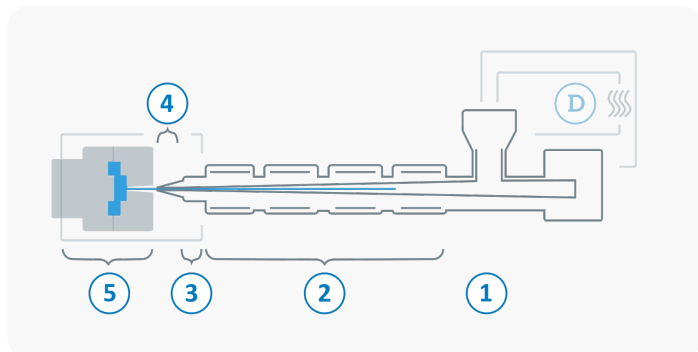
ISO 1133

275°C/5kg

10 cm³/10 min

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	260 - 300 °C
(3) Nozzle temperature	270 - 300 °C
(4) Melt temperature	270 - 300 °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

