

AKROMID® A3 GK 40 1 black (1804)

PA66 GB40

AKROMID® A3 GK 40 1 black (1804) is a heat stabilised PA 6.6 filled with 40% glass beads. It is characterized by a high surface quality and low tendency to warp, which makes it suitable for use in technically demanding components in mechanical engineering and in the automotive industry.

Features

heat stabilised 130 recycled content low warpage

Properties

Modulus

5.500 MPa

Strength

95 MPa

Impact

25 kJ/m²

Sustainability

Recycled content 40 %

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

5500 MPa

1 mm/min | conditioned

2600 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

95 MPa

5 mm/min | conditioned

50 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

5 %

5 mm/min | conditioned

> 10 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

5800 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

145 MPa

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

25 kJ/m²

23°C | conditioned

45 kJ/m²

Charpy notched impact strength	23°C d.a.m.	3 kJ/m ²
ISO 179-1/1eA	23°C conditioned	5 kJ/m ²

Thermal Properties

Temperature of deflection under load HDT/A	1,8 MPa	120 °C
ISO 75		

Temperature of deflection under load HDT/B	0,45 MPa	230 °C
ISO 75		

Melting temperature	DSC, 10K/min	262 °C
ISO 11357-3		

Flammability

Flammability	1,6 mm Wall thickness	HB Class
UL 94		

Burning rate (<100 mm/min)	> 1 mm Thickness	+
FMVSS 302		

General Properties

Density	23°C	1,44 g/cm ³
ISO 1183		

Humidity absorption	70°C, 62% r.H.	1,8 - 2,0 %
ISO 1110		

Water absorption	23°C, saturated	4,8 - 5,5 %
ISO 62		

Molding shrinkage	flow	0,9 - 1,1 %
ISO 294-4	transverse	1,1 - 1,3 %

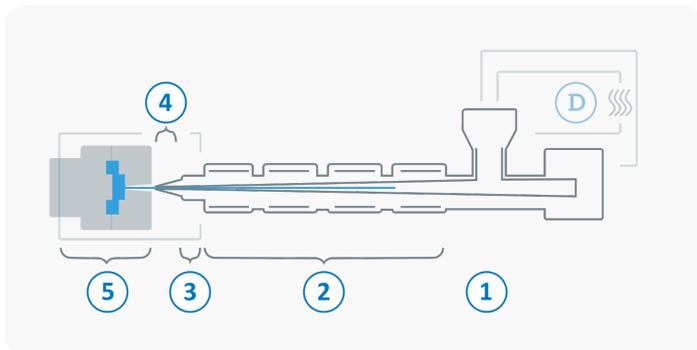
Electrical Properties

Volume resistivity	d.a.m.	10 ¹⁵ Ω x cm
IEC 62631-3-1		

Surface resistivity IEC 62631-3-2	d.a.m.	10¹³ Ω
Comparative tracking index IEC 60112	Test liquid A	500 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	260 - 300 °C
3	Nozzle temperature	270 - 310 °C
4	Melt temperature	280 - 300 °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