

AKROMID®

A3 GF 40 1 natural (2381)

PA66 GF40

AKROMID® A3 GF 40 1 natural (2381) is a 40% glass fibre reinforced, heat stabilised polyamide 6.6 with high rigidity and strength and light inherent color.

Features

heat stabilised 130

Properties

Modulus

13.100 MPa

Strength

225 MPa

Impact

100 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

13100 MPa

1 mm/min | conditioned

9800 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

225 MPa

5 mm/min | conditioned

160 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

3 %

5 mm/min | conditioned

4 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

12000 MPa

2 mm/min | conditioned

9300 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

360 MPa

2 mm/min | conditioned

260 MPa

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

100 kJ/m²

23°C | conditioned

105 kJ/m²

-30°C | d.a.m.

95 kJ/m²

-30°C | conditioned

95 kJ/m²

Charpy notched impact strength ISO 179-1/1eA	23°C d.a.m.	17 kJ/m ²
	23°C conditioned	20 kJ/m ²
	-30°C d.a.m.	15 kJ/m ²
	-30°C conditioned	15 kJ/m ²

Ball indentation hardness ISO 2039-1	961N/30s d.a.m.	270 MPa
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Thermal Properties

Temperature of deflection under load HDT/A ISO 75	1,8 MPa	260 °C
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Temperature of deflection under load HDT/B ISO 75	0,45 MPa	260 °C
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Temperature of deflection under load HDT/C ISO 75	8 MPa	225 °C
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Melting temperature ISO 11357-3	DSC, 10K/min	262 °C
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Temperature index for 50% loss of tensile strength IEC 60216	5.000 h	160 - 175 °C
	20.000 h	130 - 150 °C

Flammability

Flammability UL 94	0,8 mm Wall thickness	HB Class
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GWFI IEC 60695-2-12	1,6 mm Wall thickness	650 °C
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Burning rate (<100 mm/min) FMVSS 302	> 1 mm Thickness	+
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General Properties

Density ISO 1183	23°C	1,46 g/cm ³
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Humidity absorption ISO 1110	70°C, 62% r.H.	1,7 - 1,9 %
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Water absorption	23°C, saturated	4,3 - 4,7 %
ISO 62		

Molding shrinkage	flow	0,2 %
ISO 294-4	transverse	1,2 %

Electrical Properties

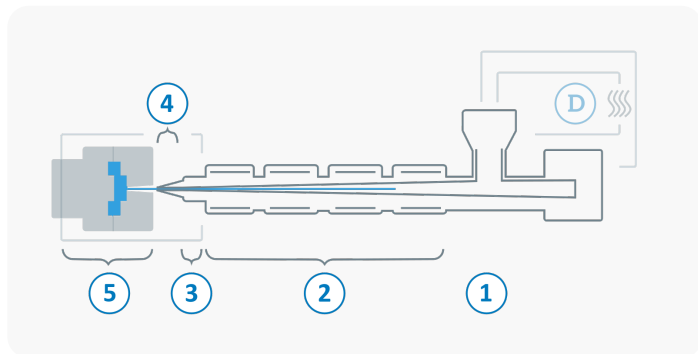
Volume resistivity	d.a.m.	$10^{13} \Omega \times \text{cm}$
IEC 62631-3-1	conditioned	$10^{10} \Omega \times \text{cm}$

Surface resistivity	d.a.m.	$10^{12} \Omega$
IEC 62631-3-2	conditioned	$10^{10} \Omega$

Comparative tracking index	Test liquid A	600 V
IEC 60112		

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