

AKROMID®

A3 GF 15 1 natural (2308)

PA66 GF15

AKROMID® A3 GF 15 1 natural (2308) is a 15% glass fibre reinforced, polyamide 6.6. It is characterised by average stiffness and strength. Furthermore, the material is heat stabilised and therefore perfectly suitable for technical parts in industrial engineering and in the automotive industry.

Features

heat stabilised 130

Properties

Modulus

6.400 MPa

Strength

140 MPa

Impact

45 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

6400 MPa

1 mm/min | conditioned

3700 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

140 MPa

5 mm/min | conditioned

80 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

3,5 %

5 mm/min | conditioned

12 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

6100 MPa

2 mm/min | conditioned

3800 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

200 MPa

2 mm/min | conditioned

130 MPa

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

45 kJ/m²

23°C | conditioned

90 kJ/m²

-30°C | d.a.m.

43 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

7 kJ/m²

23°C | conditioned

10 kJ/m²

-30°C | d.a.m.

6 kJ/m²

Ball indentation hardness

ISO 2039-1

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

200 MPa

Thermal Properties

Temperature of deflection under load HDT/A

ISO 75

1,8 MPa

245 °C

Temperature of deflection under load HDT/B

ISO 75

0,45 MPa

260 °C

Melting temperature

ISO 11357-3

DSC, 10K/min

262 °C

Coefficient of linear thermal expansion

ISO 11359-1/2

23°C to 80°C | parallel

0,34 10⁻⁴/K

23°C to 80°C | transverse

1,11 10⁻⁴/K

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

GWFI

IEC 60695-2-12

1,6 mm Wall thickness

650 °C

Burning rate (<100 mm/min)

FMVSS 302

> 1 mm Thickness

+

General Properties

Density

ISO 1183

23°C

1,24 g/cm³

Humidity absorption

ISO 1110

70°C, 62% r.H.

2,5 - 2,7 %

Water absorption

ISO 62

23°C, saturated

6,7 - 7,3 %

Molding shrinkage

ISO 294-4

flow

0,3 - 0,5 %

transverse

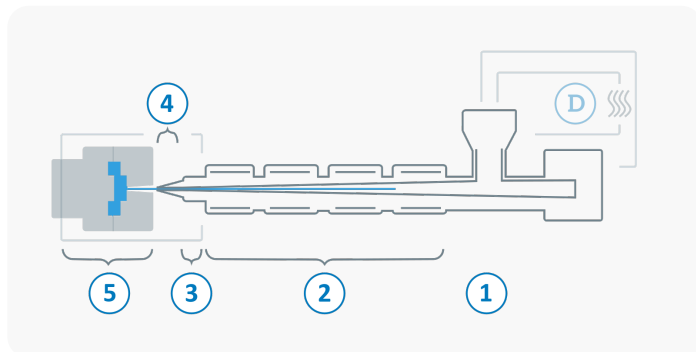
0,9 - 1,1 %

Electrical Properties

Volume resistivity IEC 62631-3-1	d.a.m. conditioned	$10^{13} \Omega \times \text{cm}$ $10^{10} \Omega \times \text{cm}$
Surface resistivity IEC 62631-3-2	d.a.m. conditioned	$10^{12} \Omega$ $10^{10} \Omega$
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	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

Diagrams

