

AKROMID® NEXT G3 GF 30 1 natural (8085)

PRELIMINARY

PA6.9 GF30

The partly bio-based AKROMID® NEXT G3 GF 30 1 natural (8085) has an increased chemical resistance and a lower moisture absorption compared to the classic PA 6 and PA 6.6. This heat stabilised and 30% glass fibre reinforced PA 6.9 is suitable for components with high demands on strength and stiffness.

Features

Bio-based heat stabilised 130 electrically neutral reduced moisture

Properties

Modulus

8.600 MPa

Strength

160 MPa

Impact

80 kJ/m²

Sustainability

Biobased carbon content 56 %

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

8600 MPa

1 mm/min | conditioned

6300 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

160 MPa

5 mm/min | conditioned

120 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

3,8 %

5 mm/min | conditioned

5,3 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

8300 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

250 MPa

Flexural strain at break

ISO 178

2 mm/min | d.a.m.

4,8 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

80 kJ/m²

23°C | conditioned

80 kJ/m²

-30°C | d.a.m.

70 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

13 kJ/m²

23°C | conditioned

14 kJ/m²

-30°C | d.a.m.

11 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A

ISO 75

1,8 MPa

195 °C

Melting temperature

ISO 11357-3

DSC, 10K/min

219 °C

General Properties

Density

ISO 1183

23°C

1,31 g/cm³

Humidity absorption

ISO 1110

70°C, 62% r.H.

1,1 - 1,3 %

Water absorption

ISO 62

23°C, saturated

3,0 - 3,4 %

Molding shrinkage

ISO 294-4

flow

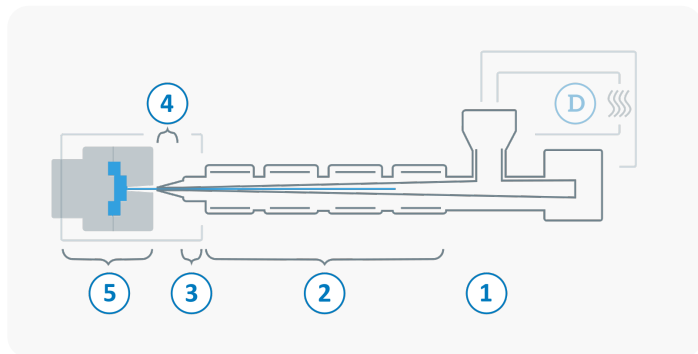
0,1 - 0,3 %

transverse

0,7 - 0,9 %

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	240 - 290 °C
3	Nozzle temperature	240 - 300 °C
4	Melt temperature	270 - 290 °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