

AKROMID®

NEXT S3 GF 50 1 HU black (8827)

PA6.10 GF50

AKROMID® NEXT S3 GF 50 1 black (8827) is a partially biobased and heat-stabilised PA6.10. With 50% glass fibre reinforcement, the material is suitable for household and industrial applications with high demands on strength and stiffness. This sustainable and UL listed grade is characterised by its low moisture absorption and high chemical resistance compared to classic PA6 and PA 6.6.

Features

Bio-based heat stabilised 130 reduced moisture

3D printing / additive manufacturing

Regulatory



Properties

Modulus

14.500 MPa

Strength

200 MPa

Impact

100 kJ/m²

Sustainability

Biobased carbon content

58 %

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

14500 MPa

1 mm/min | conditioned

11000 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

200 MPa

5 mm/min | conditioned

150 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

3,5 %

5 mm/min | conditioned

4,5 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

13800 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

310 MPa

Flexural strain at break ISO 178	2 mm/min d.a.m.	3,6 %
Charpy impact strength ISO 179-1/1eU	23°C d.a.m.	100 kJ/m ²
	23°C conditioned	100 kJ/m ²
	-30°C d.a.m.	105 kJ/m ²
Charpy notched impact strength ISO 179-1/1eA	23°C d.a.m.	20 kJ/m ²
	-30°C d.a.m.	16 kJ/m ²
Ball indentation hardness ISO 2039-1	961N/30s d.a.m.	230 MPa

Thermal Properties

Temperature of deflection under load HDT/A ISO 75	1,8 MPa	205 °C
Temperature of deflection under load HDT/C ISO 75	8 MPa	170 °C
Melting temperature ISO 11357-3	DSC, 10K/min	220 °C

Flammability

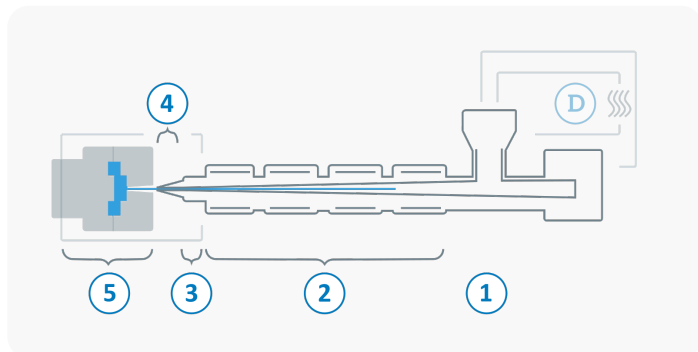
Flammability UL 94	 0,8 mm Wall thickness	HB Class
	 3,2 mm Wall thickness	HB Class
Burning rate (<100 mm/min) FMVSS 302	> 1 mm Thickness	+

General Properties

Density ISO 1183	23°C	1,51 g/cm ³
Humidity absorption ISO 1110	70°C, 62% r.H.	0,8 - 1,0 %
Molding shrinkage ISO 294-4	flow	0,1 - 0,3 %
	transverse	0,6 - 0,8 %

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