

AKROMID®

NEXT S3 GF 15 1 HU black (8823)

PA6.10 GF 15

AKROMID® NEXT S3 GF 15 1 black (8823) is a partially biobased and heat-stabilised PA6.10. With 15% glass fibre reinforcement, the material is suitable for household and industrial applications with medium 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

Regulatory



Properties

Modulus

5.500 MPa

Strength

110 MPa

Impact

75 kJ/m²

Sustainability

Biobased carbon content 60 %

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

5500 MPa

1 mm/min | conditioned

3500 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

110 MPa

5 mm/min | conditioned

75 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

5,5 %

5 mm/min | conditioned

15 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

75 kJ/m²

23°C | conditioned

80 kJ/m²

-30°C | d.a.m.

60 kJ/m²

Charpy notched impact strength	23°C d.a.m.	5 kJ/m²
ISO 179-1/1eA	-30°C d.a.m.	5 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A	1,8 MPa	190 °C
ISO 75		
Temperature of deflection under load HDT/B	0,45 MPa	220 °C
ISO 75		
Temperature of deflection under load HDT/C	8 MPa	75 °C
ISO 75		
Melting temperature	DSC, 10K/min	220 °C
ISO 11357-3		

Flammability

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

General Properties

Density	23°C	1,18 g/cm³
ISO 1183		
Humidity absorption	70°C, 62% r.H.	1,4 - 1,6 %
ISO 1110		
Molding shrinkage	flow	0,5 - 0,7 %
ISO 294-4	transverse	1,0 - 1,2 %

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