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AKRO COMPOUNDS

Compound No.: **8824**

AKROMID® UL
NEXT S3 GF 30 1 HU natural (8824)

PA6.10 GF30

AKROMID® NEXT S3 GF 30 1 natural (8824) is a partially biobased and heat-stabilised PA6.10. With 30% 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

UL

Properties

Modulus	Strength	Impact
8.600 MPa	160 MPa	100 kJ/m²

Sustainability

Biobased carbon content	**61 %**

Mechanical Properties

Tensile modulus ISO 527-2	1 mm/min | d.a.m. 1 mm/min | conditioned	**8600 MPa** **6200 MPa**
Tensile stress at break ISO 527-2	5 mm/min | d.a.m. 5 mm/min | conditioned	**160 MPa** **110 MPa**
Tensile strain at break ISO 527-2	5 mm/min | d.a.m. 5 mm/min | conditioned	**4,5 %** **7,5 %**
Flexural modulus ISO 178	2 mm/min | d.a.m.	**7700 MPa**
Flexural strength ISO 178	2 mm/min | d.a.m.	**230 MPa**

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Flexural strain at break ISO 178	2 mm/min | d.a.m.	**5,5 %**
Charpy impact strength ISO 179-1/1eU	23°C | d.a.m. 23°C | conditioned -30°C | d.a.m.	**100 kJ/m²** **100 kJ/m²** **100 kJ/m²**
Charpy notched impact strength ISO 179-1/1eA	23°C | d.a.m. -30°C | d.a.m.	**17 kJ/m²** **12 kJ/m²**
Ball indentation hardness ISO 2039-1	961N/30s | d.a.m.	**195 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	**145 °C**
Melting temperature ISO 11357-3	DSC, 10K/min	**220 °C**

Flammability

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

General Properties

Density ISO 1183	23°C	**1,31 g/cm³**
Humidity absorption ISO 1110	70°C, 62% r.H.	**1,1 1,3 %**
Molding shrinkage ISO 294-4	flow transverse	**0,2 - 0,4 %** **0,8 - 1,0 %**

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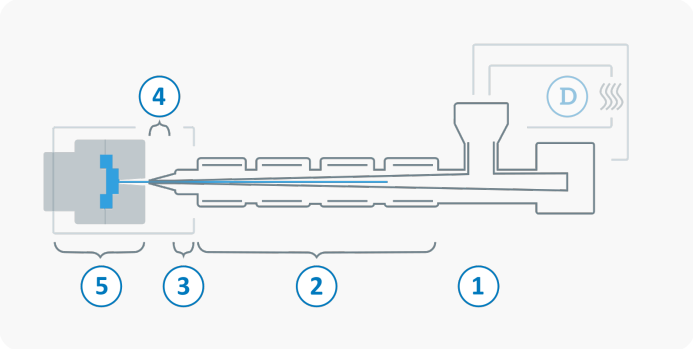
Processing

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 (τ <= -30°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