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AKRO COMPOUNDS

Compound No.: **8690**

AKROMID® PRELIMINARY
NEXT U28 ICF 20 1 black (8690)

PA11 CF20

AKROMID® NEXT U28 ICF 20 1 black (8690) is a Polyamide 11 reinforced with 20% recycled carbon fibre. The PA 11 is made from castor seed oil (bio-based content > 92%). The compound's low density as well as excellent ductility even at lower temperatures combined with high stiffness and strength enable the use for demanding applications, e.g., for lightweight construction or sports & leisure.

Features

heat stabilised 130 | recycled content | reduced density | reduced moisture | 3D printing / additive manufacturing | Sports & leisure | lightweight construction

Properties

Modulus	Strength	Impact
9.300 MPa	110 MPa	60 kJ/m²

Sustainability

Biobased carbon content	**63 %**
Recycled content	**20 %**

Mechanical Properties

Tensile modulus ISO 527-2	1 mm/min | d.a.m. 1 mm/min | conditioned	**9300 MPa** **7300 MPa**
Tensile stress at break ISO 527-2	5 mm/min | d.a.m. 5 mm/min | conditioned	**110 MPa** **90 MPa**
Tensile strain at break ISO 527-2	5 mm/min | d.a.m. 5 mm/min | conditioned	**5,1 %** **4,7 %**
Flexural modulus ISO 178	2 mm/min | d.a.m.	**9100 MPa**

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Flexural strength ISO 178	2 mm/min | d.a.m.	**110 MPa**
Charpy impact strength ISO 179-1/1eU	23°C | d.a.m.	**60 kJ/m²**
Charpy notched impact strength ISO 179-1/1eA	23°C | d.a.m.	**15 kJ/m²**

Thermal Properties

Melting temperature ISO 11357-3	DSC, 10K/min	**189 °C**

General Properties

Density ISO 1183	23°C	**1,12 g/cm³**
Humidity absorption ISO 1110	70°C, 62% r.H.	**0,7 - 0,9 %**
Water absorption ISO 62	23°C, saturated	**1,3 - 1,7 %**
Molding shrinkage ISO 294-4	flow transverse	**0,3 - 0,5 %** **0,7 - 0,9 %**

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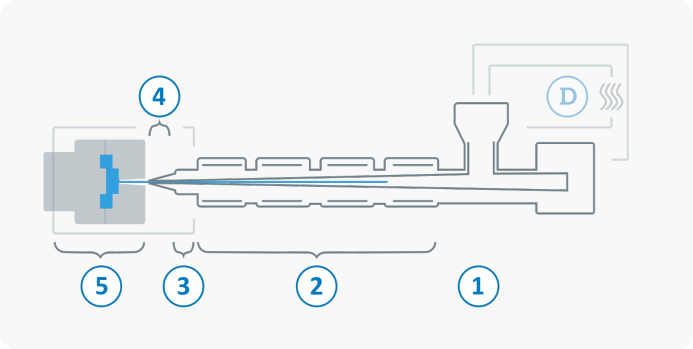
Processing

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 - 300 °C
3	Nozzle temperature	230 - 300 °C
4	Melt temperature	240 - 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