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AKRO COMPOUNDS

Compound No.: **6495**

AKROMID®
A3 ICF 30 5 black (6495)

PA66 CF30

AKROMID® A3 ICF 30 5 black (6495) is a high-performance Polyamide 6.6 with 30% carbon fiber reinforcement which is high heat stabilised, offering exceptional stiffness and flexural strength. Compared to glass fiber-reinforced PA 6.6, it provides an optimized strength-to-weight ratio. Thanks to its low density and high mechanical durability, this material is ideal for load-bearing components in the automotive industry, such as lightweight structural parts, as well as for sports and leisure applications, including high-stress sports equipment and technical components.

Features

heat stabilised 160 | recycled content | antistatic/conductive | tribological modified | Sports & leisure | lightweight construction

Properties

Modulus	Strength	Impact
23.000 MPa	**235** MPa	**50** kJ/m²

Sustainability

Recycled content	**30 %**

Mechanical Properties

Tensile modulus ISO 527-2	1 mm/min | d.a.m. 1 mm/min | conditioned	**23000 MPa** **14500 MPa**
Tensile stress at break ISO 527-2	5 mm/min | d.a.m. 5 mm/min | conditioned	**235 MPa** **165 MPa**
Tensile strain at break ISO 527-2	5 mm/min | d.a.m. 5 mm/min | conditioned	**1,8 %** **3 %**
Flexural modulus ISO 178	2 mm/min | d.a.m.	**22000 MPa**

Flexural strength ISO 178	2 mm/min | d.a.m.	**370 MPa**
Flexural strain at break ISO 178	2 mm/min | d.a.m.	**2,5 %**
Charpy impact strength ISO 179-1/1eU	23°C | d.a.m. 23°C | conditioned	**50 kJ/m²** **65 kJ/m²**
Charpy notched impact strength ISO 179-1/1eA	23°C | d.a.m. 23°C | conditioned -30°C | d.a.m. -30°C | conditioned	**8 kJ/m²** **11 kJ/m²** **6 kJ/m²** **6 kJ/m²**

Thermal Properties

Temperature of deflection under load HDT/A ISO 75	1,8 MPa	**250 °C**
Melting temperature ISO 11357-3	DSC, 10K/min	**262 °C**
Coefficient of linear thermal expansion ISO 11359-1/2	23°C to 80°C | parallel 23°C to 80°C | transverse	**0,06 10^{-4}/K** **0,72 10^{-4}/K**

Flammability

Flammability UL 94	1,6 mm Wall thickness	**HB Class**
Burning rate (<100 mm/min) FMVSS 302	> 1 mm Thickness	**+**

General Properties

Density ISO 1183	23°C	**1,27 g/cm³**
Humidity absorption ISO 1110	70°C, 62% r.H.	**1,8 - 2,0 %**
Molding shrinkage ISO 294-4	flow transverse	**0,1 - 0,3 %** **0,5 - 0,7 %**

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Electrical Properties

Volume resistivity IEC 62631-3-1	d.a.m.	**10^4 Ω x cm**
Surface resistivity IEC 62631-3-2	d.a.m.	**10^4 Ω**

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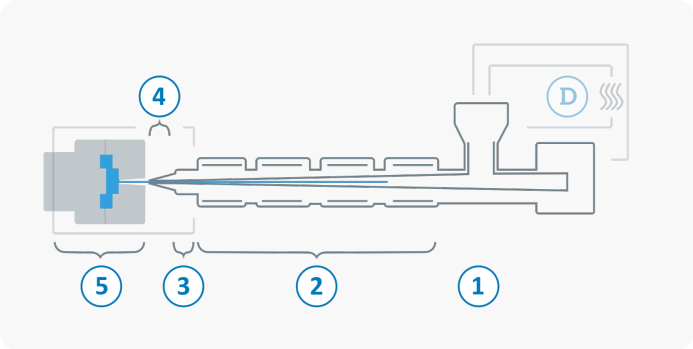
Processing

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	260 - 310 °C
3	Nozzle temperature	270 - 310 °C
4	Melt temperature	280 - 310 °C
5	Mold temperature	80 - 140 °C
→	Holding pressure, spec.	300 - 800 bar
←	Back pressure, spec.	50 -150 bar
	Injection speed	medium to high
	Screw speed	8 - 15 m/min

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Diagrams