

PA6.6 – Polyamide 6.6 PA66 CF15

AKROMID® A3 ICF 15 black (5056)

Tensile modulus

12000 MPa

1 mm/min

ISO 527-2

Stress at break

170 MPa

5 mm/min

ISO 527-2

Charpy impact strength

45 kJ/m²

23°C

ISO 179-1/1eU

AKROMID® A3 ICF 15 black (5056) is a 15% carbon fibre reinforced polyamide 6.6 with high flexural strength and good sliding properties

Typical applications

Mechanically high stressed parts in all industries



Mechanical Properties

Tensile modulus (1 mm/min | ISO 527-2)

d.a.m.

12000 MPa

conditioned

7400 MPa

Stress at break (5 mm/min | ISO 527-2)

d.a.m.

170 MPa

conditioned

110 MPa

Strain at break (5 mm/min | ISO 527-2)

d.a.m.

3 %

conditioned

5 %

Flexural modulus (2 mm/min | ISO 178)

d.a.m.

10400 MPa

conditioned

7000 MPa

Flexural strength (2 mm/min | ISO 178)

d.a.m.

250 MPa

conditioned

170 MPa

Flexural strain at break (2 mm/min | ISO 178)

d.a.m.

3 %

conditioned

5 %

Charpy impact strength (23°C | ISO 179-1/1eU)

d.a.m.

45 kJ/m²

conditioned

65 kJ/m²

Charpy impact strength (-30°C | ISO 179-1/1eU)

d.a.m.

35 kJ/m²

Charpy notched impact strength (23°C | ISO 179-1/1eA)

d.a.m.

5 kJ/m²

conditioned

6 kJ/m²

Charpy notched impact strength (-30°C | ISO 179-1/1eA)

d.a.m.

4 kJ/m²



Thermal Properties

Temperature of deflection under load HDT/A (1,8 MPa | ISO 75)

245 °C

Melting temperature (DSC, 10K/min | DIN EN ISO 11357-3)

262 °C



Flammability

Burning rate (UL 94)

1,6mm Wall thickness

HB Class



General properties

Density (23°C ISO 1183)	1,2 g/cm ³
Humidity absorption (70°C, 62% r.H. ISO 1110)	2,6 %
Molding shrinkage (flow ISO 294-4)	0,2-0,4 %
Molding shrinkage (transverse ISO 294-4)	0,7-0,9 %



Electrical Properties

Surface resistivity (DIN EN 62631-3-2)	
d.a.m.	1,0E+5 Ohm
conditioned	1,0E+5 Ohm



Rheological Properties

Flowability (2mm Thickness AKRO)	460 mm
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Sustainability

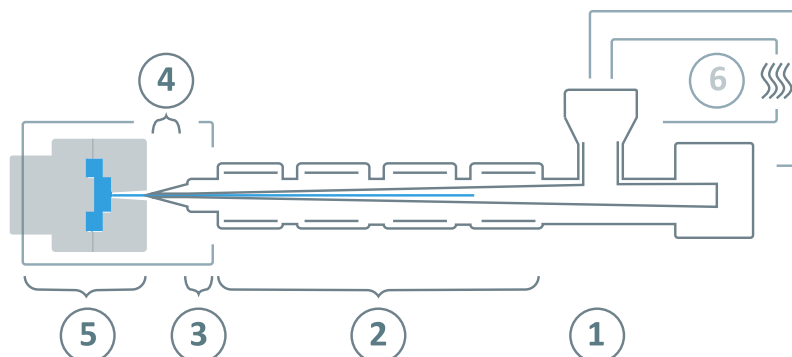
Recycled content (at least)	15 %
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Processing information

The listed values are recommendations. Higher values should be used for higher glass loadings. We recommend only dehumidifying or vacuum dryers. Extensive drying can cause filling problems and surface defects.



⑥	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	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