

PA6 – Polyamide 6 PA6 CF15

AKROMID® B3 ICF 15 black (5026)

Tensile modulus

11000 MPa

1 mm/min

ISO 527-2

Stress at break

140 MPa

5 mm/min

ISO 527-2

Charpy impact strength

55 kJ/m²

23°C

ISO 179-1/1eU

AKROMID® B3 ICF 15 black (5026) is a 15% carbon fibre reinforced polyamide 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.

11000 MPa

conditioned

5000 MPa

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

d.a.m.

140 MPa

conditioned

80 MPa

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

d.a.m.

3 %

conditioned

7 %

Flexural modulus (2 mm/min | ISO 178)

d.a.m.

9000 MPa

conditioned

7000 MPa

Flexural strength (2 mm/min | ISO 178)

d.a.m.

200 MPa

conditioned

150 MPa

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

d.a.m.

3,5 %

conditioned

6 %

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

d.a.m.

55 kJ/m²

conditioned

80 kJ/m²

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

d.a.m.

45 kJ/m²

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

d.a.m.

6 kJ/m²

conditioned

10 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)	200 °C
Melting temperature (DSC, 10K/min DIN EN ISO 11357-3)	220 °C
Coefficient of linear thermal expansion, parallel (23°C bis 80°C ISO 11359-1/2)	0,17 1,0E-4/K
Coefficient of linear thermal expansion, transverse (23°C bis 80°C ISO 11359-1/2)	0,66 1,0E-4/K
Thermal conductivity (DIN 52612)	0,31 W/mK



Flammability

Burning rate (UL 94) 1,6mm Wall thickness	HB Class
--	----------



General properties

Density (23°C ISO 1183)	1,19 g/cm ³
Humidity absorption (70°C, 62% r.H. ISO 1110)	2,7 %
Molding shrinkage (flow ISO 294-4)	0,3 %
Molding shrinkage (transverse ISO 294-4)	0,7 %



Electrical Properties

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



Rheological Properties

Flowability (2mm Thickness AKRO)	360 mm
------------------------------------	--------

Sustainability

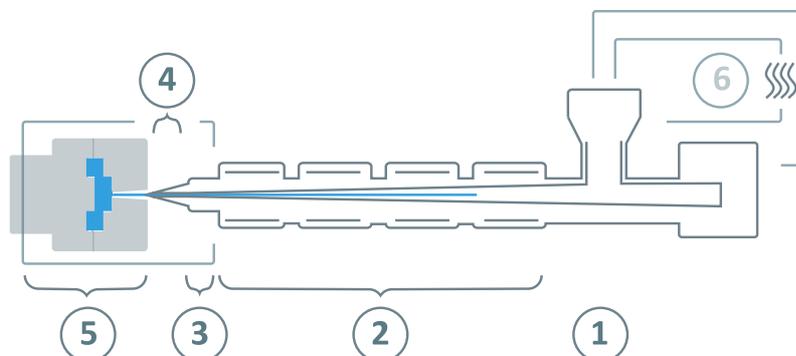
Recycled content (at least)	15 %
-----------------------------	------

PA6 – Polyamide 6 PA6 CF15

AKROMID® B3 ICF 15 black (5026)

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	240 - 300°C
③	Nozzle temperature	270 - 300°C
④	Melt temperature	270 - 300°C
⑤	Mold temperature	80 - 130°C
→	Holding pressure, spec.	300 - 800 bar
←	Back pressure, spec.	50 - 150 bar
	Injection speed	medium to high
	Screw speed	8 - 15 m/min