

# AKROMID®

## A3 ICF 15 black (5056)

PA66 CF15

AKROMID® A3 ICF 15 black (5056) is a high-performance Polyamide 6.6 with 15% carbon fiber reinforcement, offering high 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

recycled content   reduced density   antistatic/conductive   tribological modified   Sports & leisure   lightweight construction

### Properties

Modulus

**12.000 MPa**

Strength

**170 MPa**

Impact

**45 kJ/m²**

## Sustainability

Recycled content **15 %**

## Mechanical Properties

### Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

**12000 MPa**

1 mm/min | conditioned

**7400 MPa**

### Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

**170 MPa**

5 mm/min | conditioned

**110 MPa**

### Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

**3 %**

5 mm/min | conditioned

**5 %**

### Flexural modulus

ISO 178

2 mm/min | d.a.m.

**10400 MPa**

2 mm/min | conditioned

**7000 MPa**

### Flexural strength

ISO 178

2 mm/min | d.a.m.

**250 MPa**

2 mm/min | conditioned

**170 MPa**

<b>Flexural strain at break</b>	2 mm/min   d.a.m.	<b>3 %</b>
ISO 178	2 mm/min   conditioned	<b>5 %</b>

<b>Charpy impact strength</b>	23°C   d.a.m.	<b>45 kJ/m<sup>2</sup></b>
ISO 179-1/1eU	23°C   conditioned	<b>65 kJ/m<sup>2</sup></b>
	-30°C   d.a.m.	<b>35 kJ/m<sup>2</sup></b>

<b>Charpy notched impact strength</b>	23°C   d.a.m.	<b>5 kJ/m<sup>2</sup></b>
ISO 179-1/1eA	23°C   conditioned	<b>6 kJ/m<sup>2</sup></b>
	-30°C   d.a.m.	<b>4 kJ/m<sup>2</sup></b>

## Thermal Properties

<b>Temperature of deflection under load HDT/A</b>	1,8 MPa	<b>245 °C</b>
ISO 75		

<b>Melting temperature</b>	DSC, 10K/min	<b>262 °C</b>
ISO 11357-3		

## Flammability

<b>Flammability</b>	1,6 mm Wall thickness	<b>HB Class</b>
UL 94		

## General Properties

<b>Density</b>	23°C	<b>1,2 g/cm<sup>3</sup></b>
ISO 1183		

<b>Humidity absorption</b>	70°C, 62% r.H.	<b>2,6 %</b>
ISO 1110		

<b>Molding shrinkage</b>	flow	<b>0,2 - 0,4 %</b>
ISO 294-4	transverse	<b>0,7 - 0,9 %</b>

## Electrical Properties

<b>Surface resistivity</b>	d.a.m.	<b>10<sup>5</sup> Ω</b>
IEC 62631-3-2	conditioned	<b>10<sup>5</sup> Ω</b>

## Rheological Properties

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### Flowability

AKRO

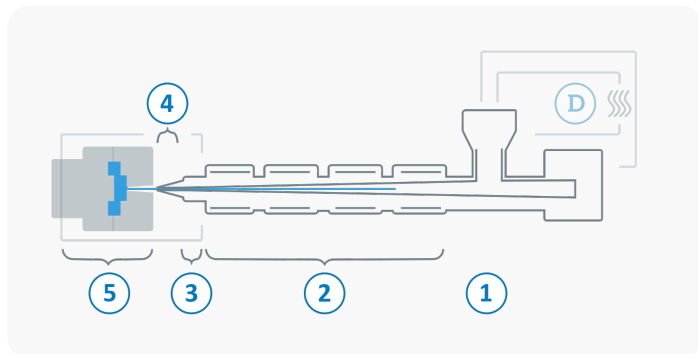
2 mm Thickness

**460 mm**

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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.



<b>D</b>	Drying time	0 - 4 h
	Drying temperature ( $\tau \leq -30^{\circ}\text{C}$ )	80 °C
	Processing moisture	0,02 - 0,1 %
<b>1</b>	Feed section	60 - 80 °C
<b>2</b>	Temperature Zone 1 - Zone 4	260 - 310 °C
<b>3</b>	Nozzle temperature	270 - 310 °C
<b>4</b>	Melt temperature	280 - 310 °C
<b>5</b>	Mold temperature	80 - 140 °C
<b>→</b>	Holding pressure, spec.	300 - 800 bar
<b>←</b>	Back pressure, spec.	50 -150 bar
	Injection speed	medium to high
	Screw speed	8 - 15 m/min