

# AKROLEN®

## PP ICF 30 AM black (8344)

PP CF30

AKROLEN PP® ICF 30 AM black (8344) is a polypropylene copolymer with 30% recycled carbon fibre reinforcement. It is characterised by low density as well as medium stiffness and strength. The material is suitable for water contact applications. Furthermore, the compound has been developed especially for additive manufacturing at fast production speeds.

### Features

recycled content   reduced density   3D printing / additive manufacturing

### Properties

Modulus

12.500 MPa

Strength

85 MPa

Impact

50 kJ/m<sup>2</sup>

## Sustainability

Recycled content 30 %

## Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

12500 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

85 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

2 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

11400 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

125 MPa

Flexural strain at break

ISO 178

2 mm/min | d.a.m.

5,3 %

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**Charpy impact strength**

ISO 179-1/1eU

23°C | d.a.m.

**50 kJ/m<sup>2</sup>**

-30°C | d.a.m.

**45 kJ/m<sup>2</sup>**

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**Charpy notched impact strength**

ISO 179-1/1eA

23°C | d.a.m.

**15 kJ/m<sup>2</sup>**

-30°C | d.a.m.

**10 kJ/m<sup>2</sup>**

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**Thermal Properties**

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**Melting temperature**

ISO 11357-3

DSC, 10K/min

**165 °C**

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**General Properties**

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**Density**

ISO 1183

23°C

**1,07 g/cm<sup>3</sup>**

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**Humidity absorption**

ISO 1110

70°C, 62% r.H.

**0,05 - 0,1 %**

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**Rheological Properties**

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**MVR**

ISO 1133

230°C/2,16kg

**2 cm<sup>3</sup>/10 min**

## 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 - 3 h
	Drying temperature ( $\tau \leq -30^{\circ}\text{C}$ )	80 °C
	Processing moisture	$\leq 1\%$
<b>1</b>	Feed section	40 - 80 °C
<b>2</b>	Temperature Zone 1 - Zone 4	200 - 255 °C
<b>3</b>	Nozzle temperature	200 - 255 °C
<b>4</b>	Melt temperature	215 - 265 °C
<b>5</b>	Mold temperature	30 - 80 °C
<b>→</b>	Holding pressure, spec.	300 - 800 bar
<b>←</b>	Back pressure, spec.	50 - 100 bar
	Injection speed	medium to high
	Screw speed	8 - 15 m/min