

# AKROLOY® PRELIMINARY

## PA GF 30 natural (6412)

PA66+PA6I/6T GF30

AKROLOY® PA GF 30 natur (6412) is a 30% glass fibre reinforced, semi-aromatic polyamide blend with high stiffness and strength, even in conditioned state.

### Properties

#### Modulus

10.200 MPa

#### Strength

200 MPa

#### Impact

70 kJ/m<sup>2</sup>

## Mechanical Properties

### Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

10200 MPa

### Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

200 MPa

### Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

2,9 %

### Flexural modulus

ISO 178

2 mm/min | d.a.m.

9500 MPa

### Flexural strength

ISO 178

2 mm/min | d.a.m.

280 MPa

### Flexural strain at break

ISO 178

2 mm/min | d.a.m.

3,4 %

### Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

70 kJ/m<sup>2</sup>

### Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

11 kJ/m<sup>2</sup>

## Thermal Properties

|                                                             |              |               |
|-------------------------------------------------------------|--------------|---------------|
| <b>Temperature of deflection under load HDT/A</b><br>ISO 75 | 1,8 MPa      | <b>235 °C</b> |
| <b>Temperature of deflection under load HDT/C</b><br>ISO 75 | 8 MPa        | <b>120 °C</b> |
| <b>Melting temperature</b><br>ISO 11357-3                   | DSC, 10K/min | <b>255 °C</b> |

## General Properties

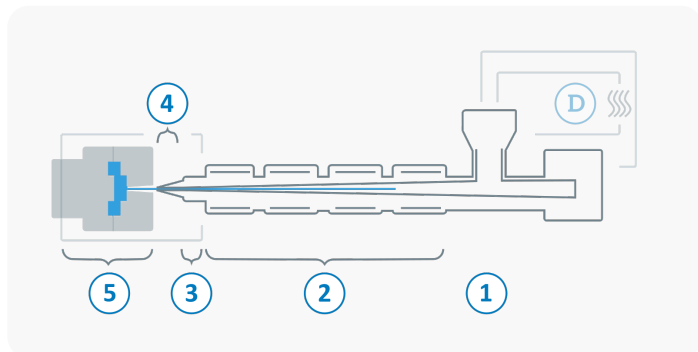
|                            |      |                              |
|----------------------------|------|------------------------------|
| <b>Density</b><br>ISO 1183 | 23°C | <b>1,36 g/cm<sup>3</sup></b> |
|----------------------------|------|------------------------------|

## Rheological Properties

|                            |                |               |
|----------------------------|----------------|---------------|
| <b>Flowability</b><br>AKRO | 1 mm Thickness | <b>160 mm</b> |
|                            | 2 mm Thickness | <b>500 mm</b> |

## 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 - 300 °C   |
| <b>3</b> | Nozzle temperature                                     | 270 - 300 °C   |
| <b>4</b> | Melt temperature                                       | 280 - 300 °C   |
| <b>5</b> | Mold temperature                                       | 90 - 130 °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   |