

# AKROMID® PRELIMINARY

## C3 GF 30 1 natural (8574)

PA66 + PA6 GF30

AKROMID® C3 GF 30 1 natural (8574) is a 30% glass fiber reinforced, heat stabilised polyamide 6.6/6 blend. It is characterised by high stiffness and strength as well as by higher temperature resistance compared to standard PA6.6/6-blends. It is therefore perfectly suitable for parts in industrial engineering and in the automotive industry, which are used at elevated temperatures.

### Features

heat stabilised 130

### Properties

#### Modulus

9.300 MPa

#### Strength

185 MPa

#### Impact

75 kJ/m<sup>2</sup>

## Mechanical Properties

### Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

9300 MPa

1 mm/min | conditioned

6500 MPa

### Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

185 MPa

5 mm/min | conditioned

120 MPa

### Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

3 %

5 mm/min | conditioned

5,5 %

### Flexural modulus

ISO 178

2 mm/min | d.a.m.

9200 MPa

### Flexural strength

ISO 178

2 mm/min | d.a.m.

275 MPa

### Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

75 kJ/m<sup>2</sup>

23°C | conditioned

90 kJ/m<sup>2</sup>

-30°C | d.a.m.

60 kJ/m<sup>2</sup>

### Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

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

23°C | conditioned

14 kJ/m<sup>2</sup>

-30°C | d.a.m.

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

## Thermal Properties

### Temperature of deflection under load HDT/A

ISO 75

1,8 MPa

247 °C

### Temperature of deflection under load HDT/B

ISO 75

0,45 MPa

257 °C

### Temperature of deflection under load HDT/C

ISO 75

8 MPa

204 °C

### Melting temperature

ISO 11357-3

DSC, 10K/min

260 °C

### Coefficient of linear thermal expansion

ISO 11359-1/2

23°C to 80°C | parallel

0,19 10<sup>-4</sup>/K

23°C to 80°C | transverse

1,04 10<sup>-4</sup>/K

### Temperature index for 50% loss of tensile strength

IEC 60216

5.000 h

160 - 175 °C

20.000 h

130 - 150 °C

## Flammability

### Flammability

UL 94

0,8 mm Wall thickness

HB Class

### Burning rate (<100 mm/min)

FMVSS 302

> 1 mm Thickness

+

## General Properties

### Density

ISO 1183

23°C

1,36 g/cm<sup>3</sup>

### Humidity absorption

ISO 1110

70°C, 62% r.H.

1,8 - 2,0 %

### Molding shrinkage

ISO 294-4

flow

0,1 - 0,3 %

transverse

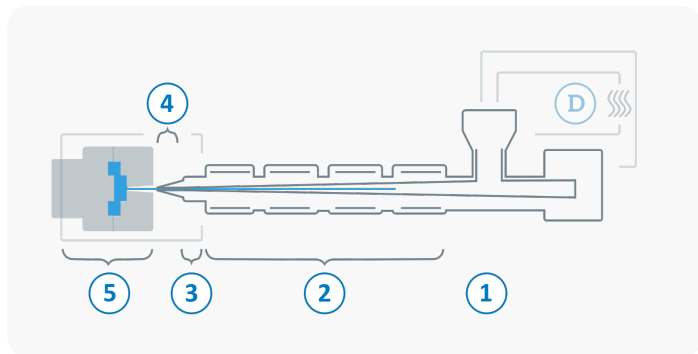
0,6 - 0,8 %

## Electrical Properties

|                                                |                       |                                                                        |
|------------------------------------------------|-----------------------|------------------------------------------------------------------------|
| <b>Volume resistivity</b><br>IEC 62631-3-1     | d.a.m.<br>conditioned | $10^{13} \Omega \times \text{cm}$<br>$10^{10} \Omega \times \text{cm}$ |
| <b>Surface resistivity</b><br>IEC 62631-3-2    | d.a.m.<br>conditioned | $10^{12} \Omega$<br>$10^{10} \Omega$                                   |
| <b>Comparative tracking index</b><br>IEC 60112 | Test liquid A         | 600 V                                                                  |

## 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                                       | 270 - 300 °C   |
| <b>5</b> | Mold temperature                                       | 80 - 100 °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   |