

# AKROMID®

## B3 GF 15 1 L natural (4690)

PA6+PP GF15

AKROMID® B3 GF 15 1 L natural (4690) is a PA6/PP-blend with reduced density compared to standard PA6 with 15% glass fibre reinforcement. The material is suitable for components with average strength and stiffness where cost and weight reduction are required at the same time. The chemical resistance of AKROMID® B3 GF 15 1 L natural (4690) is particularly superior to calcium chloride (CaCl<sub>2</sub>).

### Features

heat stabilised 130    reduced density

### Properties

Modulus

5.200 MPa

Strength

110 MPa

Impact

51 kJ/m<sup>2</sup>

## Mechanical Properties

### Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

5200 MPa

### Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

110 MPa

### Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

3,3 %

### Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

51 kJ/m<sup>2</sup>

### Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

12 kJ/m<sup>2</sup>

## Thermal Properties

### Temperature of deflection under load HDT/A

ISO 75

1,8 MPa

190 °C

|                            |              |               |
|----------------------------|--------------|---------------|
| <b>Melting temperature</b> | DSC, 10K/min | <b>220 °C</b> |
| ISO 11357-3                |              |               |

## Flammability

|                     |                       |                 |
|---------------------|-----------------------|-----------------|
| <b>Flammability</b> | 0,8 mm Wall thickness | <b>HB Class</b> |
| UL 94               |                       |                 |

|                                      |                  |          |
|--------------------------------------|------------------|----------|
| <b>Burning rate (&lt;100 mm/min)</b> | > 1 mm Thickness | <b>+</b> |
| FMVSS 302                            |                  |          |

## General Properties

|                |      |                              |
|----------------|------|------------------------------|
| <b>Density</b> | 23°C | <b>1,14 g/cm<sup>3</sup></b> |
| ISO 1183       |      |                              |

|                            |                |              |
|----------------------------|----------------|--------------|
| <b>Humidity absorption</b> | 70°C, 62% r.H. | <b>1,7 %</b> |
| ISO 1110                   |                |              |

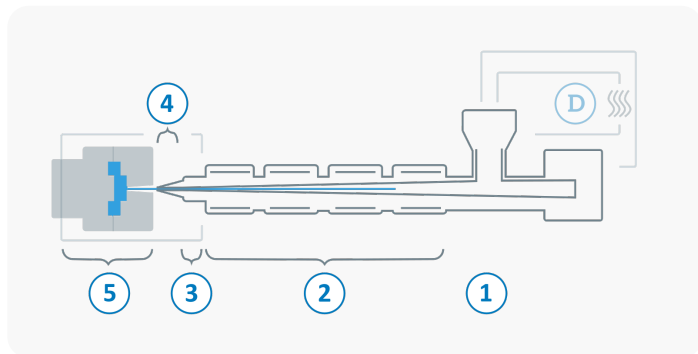
|                          |            |                    |
|--------------------------|------------|--------------------|
| <b>Molding shrinkage</b> | flow       | <b>0,3 - 0,5 %</b> |
| ISO 294-4                | transverse | <b>0,7 - 0,9 %</b> |

## Rheological Properties

|            |           |                                 |
|------------|-----------|---------------------------------|
| <b>MVR</b> | 275°C/5kg | <b>25 cm<sup>3</sup>/10 min</b> |
| ISO 1133   |           |                                 |

## 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                            | 220 - 290 °C   |
| <b>3</b> | Nozzle temperature                                     | 240 - 300 °C   |
| <b>4</b> | Melt temperature                                       | 240 - 290 °C   |
| <b>5</b> | Mold temperature                                       | 70 - 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                                            | 5 - 15 m/min   |