

# PRECITE® PRELIMINARY

## P3 GF 30 LA black (6969)

PBT GF 30

PRECITE® P3 GF 30 LA black (6969) is a 30% glass fiber reinforced PBT with excellent dimensional stability. Thanks to its low moisture absorption, PRECITE® achieves consistent mechanical and electrical properties, even under changing climatic conditions. With its exceptional combination of high stiffness and elongation, as well as excellent chemical resistance, the compound is ideally suited for precision engineering components in the automotive industry, mechanical engineering, electrical and electronic applications, and household goods. This grade is laser markable.

### Features

laser markable

### Properties

#### Modulus

10.000 MPa

#### Strength

145 MPa

#### Impact

68 kJ/m<sup>2</sup>

## Mechanical Properties

### Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

10000 MPa

### Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

145 MPa

### Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

3 %

### Flexural modulus

ISO 178

2 mm/min | d.a.m.

10500 MPa

### Flexural strength

ISO 178

2 mm/min | d.a.m.

230 MPa

### Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

68 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      | 205 °C |
| <b>Melting temperature</b><br>ISO 11357-3                   | DSC, 10K/min | 225 °C |

## Flammability

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

## General Properties

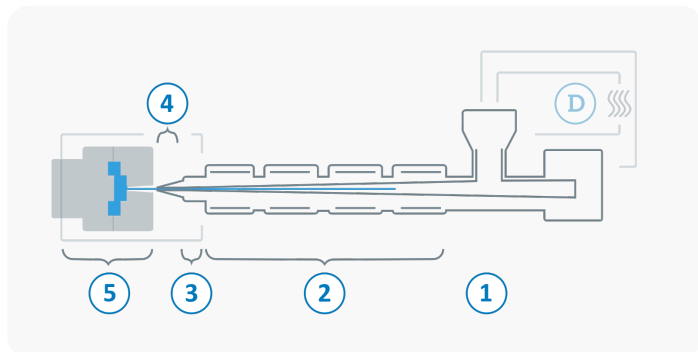
|                                        |                 |                        |
|----------------------------------------|-----------------|------------------------|
| <b>Density</b><br>ISO 1183             | 23°C            | 1,53 g/cm <sup>3</sup> |
| <b>Humidity absorption</b><br>ISO 1110 | 70°C, 62% r.H.  | 0,2 %                  |
| <b>Water absorption</b><br>ISO 62      | 23°C, saturated | 0,4 %                  |
| <b>Molding shrinkage</b><br>ISO 294-4  | flow            | 0,3 %                  |
|                                        | transverse      | 0,9 %                  |

## Electrical Properties

|                                                |               |       |
|------------------------------------------------|---------------|-------|
| <b>Comparative tracking index</b><br>IEC 60112 | Test liquid A | 400 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                                            | 3 - 4 h        |
|          | Drying temperature ( $\tau \leq -30^{\circ}\text{C}$ ) | 100 - 120 °C   |
|          | Processing moisture                                    | 0,02 - 0,04 %  |
| <b>1</b> | Feed section                                           | 60 - 80 °C     |
| <b>2</b> | Temperature Zone 1 - Zone 4                            | 250 - 275 °C   |
| <b>3</b> | Nozzle temperature                                     | 250 - 280 °C   |
| <b>4</b> | Melt temperature                                       | 260 - 275 °C   |
| <b>5</b> | Mold temperature                                       | 80 - 100 °C    |
| <b>→</b> | Holding pressure, spec.                                | 300 - 800 bar  |
| <b>←</b> | Back pressure, spec.                                   | 30 - 100 bar   |
|          | Injection speed                                        | medium to high |
|          | Screw speed                                            | 8 - 15 m/min   |

## Diagrams

