

# PRECITE® PRELIMINARY

## P3 GF 30 4 LA black (8286)

PBT-I GF30

PRECITE®P3 GF 30 4 LA black (8286) is a 30% glass fibre reinforced, hydrolysis stabilised and lasermarkable polybutylene terephthalate (PBT) with CTI 600V. It is characterised by a high stiffness and toughness as well as good chemical resistance. This formulation is GMA free (glycidyl methacrylate) and meets the VW-50136 standard. The inherent color of the compound is light black. Furthermore, the material impresses with very good dimensional stability due to its low moisture absorption. Therefore, the material is perfectly suitable for technical precision components in applications in the automotive industry, mechanical engineering, E&E and household goods industries with increased humidity.

### Features

hydrolysis / chemically stabilised   impact modified   laser markable   Sports & leisure

### Properties

Modulus

9.100 MPa

Strength

120 MPa

Impact

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

## Mechanical Properties

### Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

9100 MPa

### Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

120 MPa

### Tensile strain at break

ISO 527-2

5 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>

-30°C | d.a.m.

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

### Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

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

-30°C | d.a.m.

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

## Thermal Properties

<b>Temperature of deflection under load HDT/A</b>	1,8 MPa	200 °C
ISO 75		

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

## Flammability

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

## General Properties

<b>Density</b>	23°C	1,48 g/cm <sup>3</sup>
ISO 1183		

<b>Humidity absorption</b>	70°C, 62% r.H.	0,1 - 0,3 %
ISO 1110		

<b>Molding shrinkage</b>	flow	0,2 - 0,4 %
ISO 294-4	transverse	0,8 - 1,0 %

## Electrical Properties

<b>Volume resistivity</b>	d.a.m.	> 10 <sup>13</sup> Ω x cm
IEC 62631-3-1		

<b>Surface resistivity</b>	d.a.m.	> 10 <sup>15</sup> Ω
IEC 62631-3-2		

<b>Comparative tracking index</b>	Test liquid A	600 V
IEC 60112		

## 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 $^{\circ}\text{C}$
	Processing moisture	0,02 - 0,04 %
<b>1</b>	Feed section	60 - 80 $^{\circ}\text{C}$
<b>2</b>	Temperature Zone 1 - Zone 4	250 - 275 $^{\circ}\text{C}$
<b>3</b>	Nozzle temperature	250 - 280 $^{\circ}\text{C}$
<b>4</b>	Melt temperature	260 - 275 $^{\circ}\text{C}$
<b>5</b>	Mold temperature	80 - 100 $^{\circ}\text{C}$
<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