

## PRECITE® PRELIMINARY

### P3 GF 20 8 natural (8456)

PBT GF20

PRECITE® P3 GF 20 natural (8456) is a 20 % glass fibre reinforced, medium viscosity polybutylene terephthalate (PBT) with high stiffness and strength. Due to its low moisture absorption, this material has very good dimensional stability. The material corresponds to the European food guideline EU 10/2011 and to the American FDA 21 CFR. This grade is suitable for parts of kitchen and household appliances.

#### Regulatory



#### Properties

##### Modulus

7.200 MPa

##### Strength

125 MPa

##### Impact

65 kJ/m<sup>2</sup>

## Mechanical Properties

#### Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

7200 MPa

#### Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

125 MPa

#### Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

3,7 %

#### Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

65 kJ/m<sup>2</sup>

## Thermal Properties

#### Melting temperature

ISO 11357-3

DSC, 10K/min

225 °C

## Flammability

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**Flammability**

UL 94

1,6 mm Wall thickness

**HB Class**

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**General Properties**

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**Density**

ISO 1183

23°C

**1,45 g/cm<sup>3</sup>**

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**Molding shrinkage**

ISO 294-4

flow

**0,4 - 0,6 %**

transverse

**0,9 - 1,1 %**

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## 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