

# PRECITE® PRELIMINARY

## P3 8 black (8191)

PBT

PRECITE® P3 8 black (8191) is an unreinforced polybutylene terephthalate (PBT) with medium viscosity and good dimensional stability. It is particularly suitable for precision parts in cosmetic, food contact, E/E and appliances industries.

### Features

reduced moisture   Sports & leisure

### Regulatory



### Properties

#### Modulus

2.550 MPa

#### Strength

60 MPa

#### Impact

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

## Mechanical Properties

### Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

2550 MPa

### Tensile stress at yield

ISO 527-2

50 mm/min | d.a.m.

60 MPa

### Tensile strain at yield

ISO 527-2

50 mm/min | d.a.m.

11 %

### Tensile strain at break

ISO 527-2

50 mm/min | d.a.m.

30 %

### Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

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

### Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

5 kJ/m<sup>2</sup>

## Thermal Properties

### Temperature of deflection under load HDT/A

ISO 75

1,8 MPa

55 °C

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**Temperature of deflection under load HDT/B**

ISO 75

0,45 MPa

**150 °C**

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**Melting temperature**

ISO 11357-3

DSC, 10K/min

**225 °C**

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**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

**1,31 g/cm<sup>3</sup>**

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**Rheological Properties**

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**MVR**

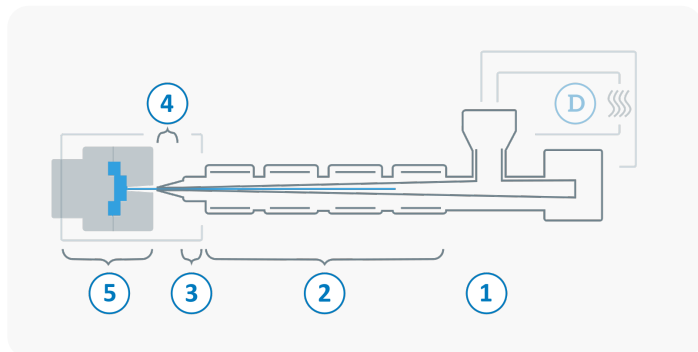
ISO 1133

250°C/2,16kg

**50 cm<sup>3</sup>/10 min**

## 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                            | 240 - 270 $^{\circ}\text{C}$ |
| <b>3</b> | Nozzle temperature                                     | 240 - 280 $^{\circ}\text{C}$ |
| <b>4</b> | Melt temperature                                       | 250 - 270 $^{\circ}\text{C}$ |
| <b>5</b> | Mold temperature                                       | 60 - 80 $^{\circ}\text{C}$   |
| <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                 |