

# PRECITE® PRELIMINARY

## E GF 40 black (7815)

PET GF40

PRECITE® E GF 40 black (7815) is a 40% glass fibre reinforced, medium viscous Polyethylene terephthalate (PET) with very high stiffness and toughness as well as high dimensional stability and chemical resistance.

### Properties

Modulus	Strength	Impact
15.000 MPa	190 MPa	55 kJ/m <sup>2</sup>

## Mechanical Properties

<b>Tensile modulus</b> ISO 527-2	1 mm/min   d.a.m.	<b>15000 MPa</b>
<b>Tensile stress at break</b> ISO 527-2	5 mm/min   d.a.m.	<b>190 MPa</b>
<b>Tensile strain at break</b> ISO 527-2	5 mm/min   d.a.m.	<b>1,8 %</b>
<b>Flexural modulus</b> ISO 178	2 mm/min   d.a.m.	<b>15500 MPa</b>
<b>Flexural strength</b> ISO 178	2 mm/min   d.a.m.	<b>300 MPa</b>
<b>Charpy impact strength</b> ISO 179-1/1eU	23°C   d.a.m.	<b>55 kJ/m<sup>2</sup></b>
<b>Charpy notched impact strength</b> ISO 179-1/1eA	23°C   d.a.m.	<b>10 kJ/m<sup>2</sup></b>

## Thermal Properties

<b>Temperature of deflection under load HDT/A</b> ISO 75	1,8 MPa	<b>233 °C</b>
---	---------	---------------

---

**Melting temperature**

ISO 11357-3

DSC, 10K/min

**260 °C**

---

**Flammability**

---

**Flammability**

UL 94

0,8 mm Wall thickness

**HB Class**

---

**General Properties**

---

**Density**

ISO 1183

23°C

**1,65 g/cm<sup>3</sup>**

---

**Molding shrinkage**

ISO 294-4

flow

**0,1 - 0,3 %**

transverse

**0,6 - 0,8 %**

---

## 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 ( $\tau \leq -30^{\circ}\text{C}$ )	120 - 140 °C
	Processing moisture	$\leq 0,02\%$
<b>1</b>	Feed section	60 - 80 °C
<b>2</b>	Temperature Zone 1 - Zone 4	270 - 290 °C
<b>3</b>	Nozzle temperature	270 - 295 °C
<b>4</b>	Melt temperature	270 - 290 °C
<b>5</b>	Mold temperature	130 - 160 °C
$\rightarrow$	Holding pressure, spec.	300 - 800 bar
$\leftarrow$	Back pressure, spec.	30 - 100 bar
	Injection speed	medium to high
	Screw speed	8 - 15 m/min