

PRECITE® PRELIMINARY

E GF 40 natural (7304)

PET GF40

PRECITE® E GF 40 natural (7304) is a 40% glass fibre reinforced, medium viscous polyethylene terephthalate (PET) with high stiffness and toughness even at elevated temperatures. Due to its low moisture absorption, this material is particularly dimensionally stable and therefore perfectly suitable for precision parts in the automotive, E&E and household goods industries, where a very good surface finish is required.

Features

surface modified reduced moisture E&E metal substitution Sports & leisure

Properties

Modulus

15.000 MPa

Strength

195 MPa

Impact

64 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

15000 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

195 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

1,9 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

15500 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

300 MPa

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

64 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

12 kJ/m²

Thermal Properties

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

Melting temperature	DSC, 10K/min	250 °C
ISO 11357-3		

Flammability

Flammability	0,8 mm Wall thickness	HB Class
UL 94		

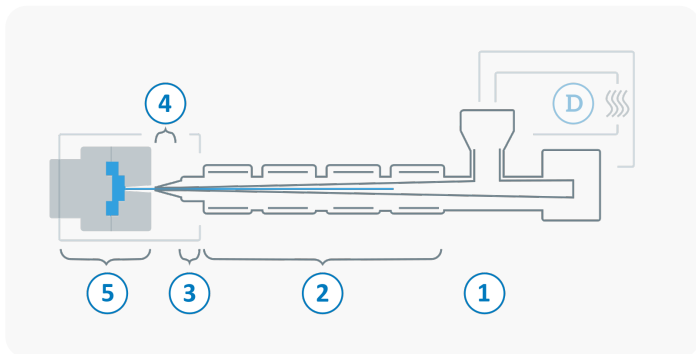
General Properties

Density	23°C	1,65 g/cm³
ISO 1183		

Molding shrinkage	flow	0,1 - 0,3 %
ISO 294-4	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.



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

Diagrams

