

PRECITE® PRELIMINARY

E ICF 15 black (7427)

PET CF15

PRECITE® E ICF 15 black (7427) is a medium viscosity polyethylene terephthalate (PET) with 15% recycled carbon fiber. Despite lower density compared to PET with glass fiber reinforcement, the product has very high strength and toughness as well as high dimensional stability. The good tribological properties and improved surface finish make it the material of choice for precision components in the automotive, mechanical engineering, E&E and household goods industries.

Features

surface modified recycled content reduced density reduced moisture tribological modified E&E Sports & leisure

lightweight construction

Properties

Modulus

13.000 MPa

Strength

160 MPa

Impact

25 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

13000 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

160 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

2,5 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

25 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

4 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A

ISO 75

1,8 MPa

204 °C

Melting temperature

ISO 11357-3

DSC, 10K/min

250 °C

Flammability

Flammability

UL 94

0,8 mm Wall thickness

HB Class

General Properties

Density

ISO 1183

23°C

1,40 g/cm³

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.



(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