

PRECITE® PRELIMINARY

P3 ICF 15 black (7720)

PBT CF 15

PRECITE® P3 ICF 15 black (7720) is a medium viscous polybutylene terephthalate (PBT) with 15% recycled carbon fiber. Despite lower density compared to PBT with glass fiber reinforcement, the product has a medium 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

12.500 MPa

Strength

135 MPa

Impact

50 kJ/m²

Sustainability

Recycled content 15 %

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

12500 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

135 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

3 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

50 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

7,5 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A ISO 75	1,8 MPa	205 °C
Melting temperature ISO 11357-3	DSC, 10K/min	225 °C

Flammability

Flammability UL 94	0,8 mm Wall thickness	HB Class
GWFI IEC 60695-2-12	1,6 mm Wall thickness	725 °C

General Properties

Density ISO 1183	23°C	1,35 g/cm ³
Humidity absorption ISO 1110	70°C, 62% r.H.	0,2 %
Water absorption ISO 62	23°C, saturated	0,4 %
Molding shrinkage ISO 294-4	flow	0,4 %
	transverse	0,9 %

Electrical Properties

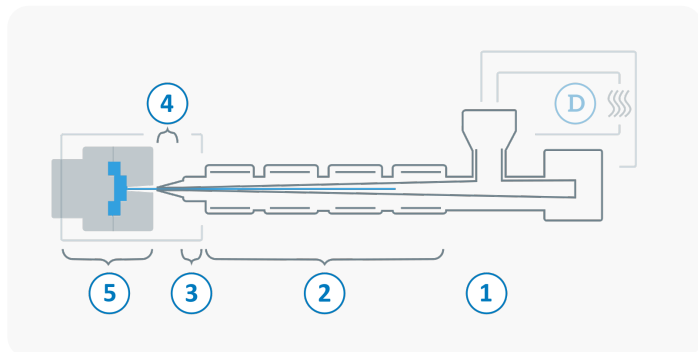
Surface resistivity IEC 62631-3-2	d.a.m.	10 ³ Ω
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Rheological Properties

MVR ISO 1133	250°C/2,16kg	25 cm ³ /10 min
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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.



D	Drying time	3 - 4 h
	Drying temperature ($\tau \leq -30^{\circ}\text{C}$)	100 - 120 $^{\circ}\text{C}$
	Processing moisture	0,02 - 0,04 %
1	Feed section	60 - 80 $^{\circ}\text{C}$
2	Temperature Zone 1 - Zone 4	250 - 275 $^{\circ}\text{C}$
3	Nozzle temperature	250 - 280 $^{\circ}\text{C}$
4	Melt temperature	260 - 275 $^{\circ}\text{C}$
5	Mold temperature	80 - 100 $^{\circ}\text{C}$
→	Holding pressure, spec.	300 - 800 bar
←	Back pressure, spec.	30 - 100 bar
	Injection speed	medium to high
	Screw speed	8 - 15 m/min