

PRECITE® PRELIMINARY

E GF 15 ECO black (8327)

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PRECITE® E GF 15 ECO black (8327) is a 15% glass fibre reinforced, medium viscous polyethylene terephthalate (PET) with very 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. The formulations of the sustainable ECO products are partly based on regenerated post-consumer feedstock and thus contribute to reducing the consumption of valuable raw materials.

Properties

Modulus

6.300 MPa

Strength

110 MPa

Impact

35 kJ/m²

Sustainability

Recycled content

25 %

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

6300 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

110 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

2,1 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

35 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	210 °C
Melting temperature ISO 11357-3	DSC, 10K/min	255 °C

Flammability

Flammability UL 94	0,8 mm Wall thickness	HB Class
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General Properties

Molding shrinkage ISO 294-4	flow	0,2 - 0,4 %
	transverse	0,8 - 1,0 %

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