

PRECITE®

P1 GF 30 black (8934)

PBT GF30

PRECITE® P1 GF 30 black (8934) is a 30% glass fibre reinforced polybutylene terephthalate (PBT). It is characterised by a high flowability, stiffness and toughness as well as good chemical resistance. Furthermore, the material has excellent dimensional stability due to its low moisture absorption. Therefore, the material is perfectly suitable for technical precision components in applications in the automotive industry, mechanical engineering, E&E and household goods industries.

Features

easy flow E&E household appliances Sports & leisure

Properties

Modulus

10.000 MPa

Strength

150 MPa

Impact

60 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

10000 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

150 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

2,8 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

60 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

10 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

1,53 g/cm³

Humidity absorption

ISO 1110

70°C, 62% r.H.

0,1 - 0,3 %

Water absorption

ISO 62

23°C, saturated

0,4 %

Molding shrinkage

ISO 294-4

flow

0,2 - 0,4 %

transverse

0,8 - 1,0 %

Electrical Properties

Volume resistivity

IEC 62631-3-1

d.a.m.

> 10¹³ Ω x cm

Surface resistivity

IEC 62631-3-2

d.a.m.

> 10¹⁵ Ω

Rheological Properties

MVR

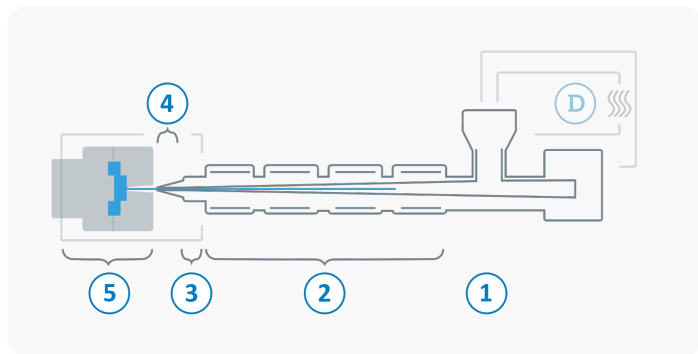
ISO 1133

250°C/2,16kg

13 cm³/10 min

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