

PRECITE® PRELIMINARY

P3 GF 25 9 FR natural (8212)

PBT GF25 FR(40)

PRECITE® P3 GF 25 9 FR natural (8212) is a 25% glass fiber-reinforced, flame-retardant polybutylene terephthalate (PBT) with a very good combination of strength and ductility and a UL94 V-0 classification from 1.6 mm thickness. The material is based on the latest flame retardant technology and is free from halogenated flame retardant additives, antimony trioxide, PFAS and melamine containing components. It offers excellent heat ageing resistance and is very dimensionally stable due to its low moisture absorption and is particularly suitable for precision parts in the e-mobility or E&E industry.

Features

heat stabilised 130 flame retardant low warpage E&E E-Mobility

Properties

Modulus

8.500 MPa

Strength

123 MPa

Impact

53 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

8500 MPa

Tensile stress at break

ISO 527-2

5 mm/min | d.a.m.

123 MPa

Tensile strain at break

ISO 527-2

5 mm/min | d.a.m.

2,6 %

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

53 kJ/m²

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

8,8 kJ/m²

Thermal Properties

Melting temperature

ISO 11357-3

DSC, 10K/min

225 °C

Flammability

Flammability UL 94	1,6 mm Wall thickness	V-0 Class
GWFI IEC 60695-2-12	1,6 mm Wall thickness	960 °C
GWIT IEC 60695-2-13	1,6 mm Wall thickness	725 °C
Oxygen index ISO 4589-2		> 30 %

General Properties

Density ISO 1183	23°C	1,53 g/cm³
Molding shrinkage ISO 294-4	flow transverse	0,2 - 0,4 % 0,8 - 1,0 %

Electrical Properties

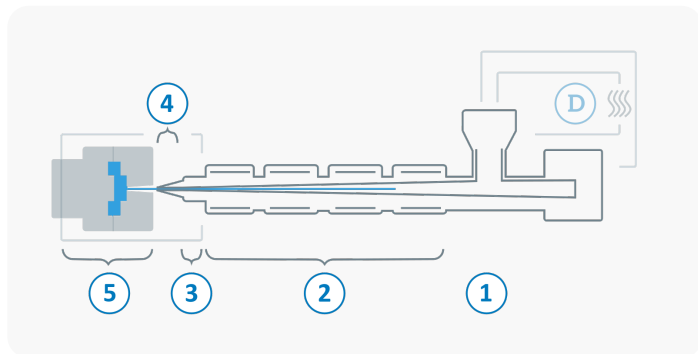
Comparative tracking index IEC 60112	Test liquid A	450 V
--	---------------	--------------

Rheological Properties

MVR ISO 1133	275°C/2,16kg	14,5 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