

PRECITE®

P1 natural (7010)

PBT

PRECITE® P1 natural (7010) an unreinforced polybutylene terephthalate (PBT) with low viscosity and good dimensional stability. It is particularly suitable for precision parts in the automotive, E&E or appliances industries.

Features

reduced moisture easy flow Sports & leisure

Properties

Modulus

2.400 MPa

Strength

55 MPa

Impact

180 kJ/m²

Mechanical Properties

Tensile modulus

ISO 527-2

1 mm/min | d.a.m.

2400 MPa

Tensile stress at yield

ISO 527-2

50 mm/min | d.a.m.

55 MPa

Tensile strain at yield

ISO 527-2

50 mm/min | d.a.m.

10 %

Flexural modulus

ISO 178

2 mm/min | d.a.m.

2600 MPa

Flexural strength

ISO 178

2 mm/min | d.a.m.

90 MPa

Charpy impact strength

ISO 179-1/1eU

23°C | d.a.m.

no break

Charpy notched impact strength

ISO 179-1/1eA

23°C | d.a.m.

3,5 kJ/m²

Thermal Properties

Temperature of deflection under load HDT/A	1,8 MPa	55 °C
ISO 75		

Melting temperature	DSC, 10K/min	223 °C
ISO 11357-3		

Flammability

Burning rate 5V	0,8 mm Wall thickness	HB Class
UL 94		

Burning rate (<100 mm/min)	> 1 mm Thickness	+
FMVSS 302		

General Properties

Density	23°C	1,31 g/cm ³
ISO 1183		

Humidity absorption	70°C, 62% r.H.	0,2 %
ISO 1110		

Water absorption	23°C, saturated	0,5 %
ISO 62		

Molding shrinkage	flow	1,7 - 1,9 %
ISO 294-4	transverse	1,8 - 2,0 %

Electrical Properties

Volume resistivity	d.a.m.	> 10 ¹³ Ω x cm
IEC 62631-3-1		

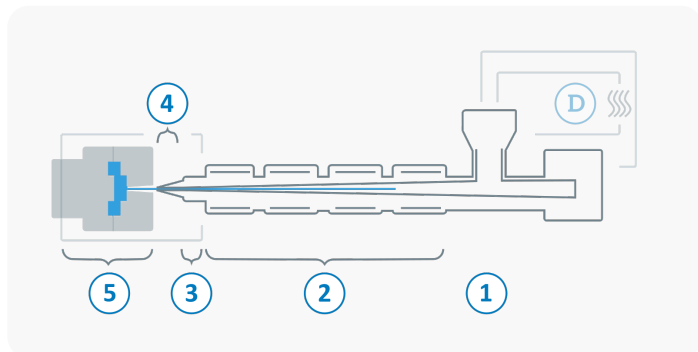
Surface resistivity	d.a.m.	10 ¹² Ω
IEC 62631-3-2		

Rheological Properties

MVR	250°C/2,16kg	65 cm ³ /10 min
ISO 1133		

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	240 - 270 $^{\circ}\text{C}$
3	Nozzle temperature	240 - 280 $^{\circ}\text{C}$
4	Melt temperature	250 - 270 $^{\circ}\text{C}$
5	Mold temperature	60 - 80 $^{\circ}\text{C}$
→	Holding pressure, spec.	300 - 800 bar
←	Back pressure, spec.	30 - 100 bar
	Injection speed	medium to high
	Screw speed	8 - 15 m/min