

Compound No.: 8457

# PRECITE® PRELIMINARY E 3 natural (8457)

PET

PRECITE® E 3 natural (8457) is an unreinforced, nucleated and medium viscosity polyethylene terephthalate (PET). Due to its very good flowability, an improved surface quality is achieved. This type is characterised by faster crystallisation compared to a standard PET. 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.

# surface modified easy flow process improved nucleated E&E Properties Modulus Strength Impact 3.200 MPa 70 MPa Na

### **Mechanical Properties**

Tensile modulus ISO 527-2	1 mm/min   d.a.m.	3200 MPa
Tensile strain at yield ISO 527-2	50 mm/min   d.a.m.	4 %
Tensile stress at break ISO 527-2	5 mm/min   d.a.m.	70 MPa
Tensile strain at break ISO 527-2	50 mm/min   d.a.m.	10 %
Charpy notched impact strength ISO 179-1/1eA	23°C   d.a.m.	3,0 kJ/m²

#### **Thermal Properties**

Temperature of deflection under load HDT/A	1,8 MPa	80 °C



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Melting temperature	DSC. 10K/min	250 °C
ISO 11357-3	230,	

# **Flammability**

Flammability UL 94	0,8 mm Wall thickness	HB Class

## **General Properties**

<b>Density</b> ISO 1183	23°C	1,37 g/cm³
Molding shrinkage	flow	1,5 - 1,7 %
ISO 294-4	transverse	1,5 - 1,7 %

# **Rheological Properties**

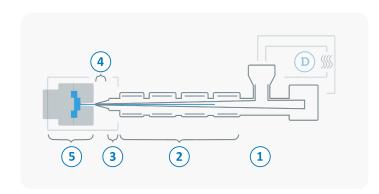
MVR	275°C/5kg	80 cm <sup>3</sup> /10 min
ISO 1133	273 C/3kg	50 cm / 10 mm



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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 (τ <= -30°C)	80 - 100 °C
	Processing moisture	0,02 %
1	Feed section	60 - 80 °C
2	Temperature Zone 1 - Zone 4	270 - 290 °C
3	Nozzle temperature	270 - 295 °C
4	Melt temperature	270 - 290 °C
5	Mold temperature	130 - 160 °C
$\ominus$	Holding pressure, spec.	300 - 800 bar
	Back pressure, spec.	30 - 100 bar
	Injection speed	medium to high
	Screw speed	8 - 15 m/min