purefil
of Switzerland

bioTEC

General

The bioTEC material was specially developed for high-performance applications. After heat treatment at 80 ° / 2h, the material has a heat resistance of up to 110 ° C. This process also increases the hardness of the material. Despite the positive thermal and mechanical properties, the material is very easy to print. A heating plate is not absolutely necessary and the odor emissions are very low.
BioTEC is made from 100% renewable raw materials such as sugar beet and sugar cane. Thus the material is a 100 percent biofilament according to ISO EN 16785-1 under the certificate number DIC-00001. BioTEC polymers comply with the EN-13432 standard. The raw material of bioTEC filament has been certified by Vinçotte (OK Compost S478) and European Bioplastics 7W2030 for compostability up to a thickness of 1.0 mm. This filament meets the composition requirements of the European Regulation No. 10/2011 on plastic materials for food contact.

100% biobased

advantageous

- No heating plate necessary
- Doesn't fade
- high heat resistance up to 110 ° C
- low shrinkage / warpage
- 100% from renewable raw materials
- less flammable than ABS

disadvantageous

- If left untreated, soft again from 60 ° C
- rather brittle due to great hardness
- needs approx. 20% more material than ABS due to its high density

Processing data

Printing temperature
190-230°C
Heated bed temperature
not necessary, recommended 50-65 ° C
Drying temperature
100 °C
Drying time
4-6 h

OK compost S478 VINÇOTTE

7W2030 compostable

Technical specifications

Shrinkage	-	**%**
MFR (ISO 1133-A)	10	g/10min
Yield stress (ISO 527-1)	50	MPa
Elongation at yield (ISO 527-1)	5	%
Elongation at break (ISO 527-1)	5	%
Tensile modulus (ISO 527-1)	3500	MPa
Heat deflection temperature 0.45 MPa amorphous (ISO 75-1)	60	°C
Heat deflection temperature 0.45 MPa crystalline (ISO 75-1)	110	°C
Thermal conductivity 23°C	-	W/(K*m)
Flammability (UL 94)	HB	
Density (ASTM D792)	1.24	g/cm^3

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