3D Printing Filament

TECHNICAL DATA SHEET – PEI (ULTEM)

Commercial name: **Machines-3D**

Raw material: Polyetherimide (PEI)

Designation: 3D printing applications

Material specificifications

Property	Value	Test Method - ISO
Density	1,27 g/cm^3	1183
Glass Transition Temperature-Tg	217°C	306
Vicat Softening temperature	212°C	306
Tensile Modulus	3200 MPa	527-2
Tensile Strength	105 MPa	527
Impact strength	10 kJ/m^2	179/2c
Heat deflection temp. HDT/A	190°C	75/A
Max usage Temp. long term	170°C	2578
Max usage Temp. short term	200°C	2578D
Dielectric strength, in oil	25 kV/mm	IEC 60243
Specific volume resistivity	1.E+15 Ω-cm	IEC 60243
Flammability	V0	UL94
Linear mould shrinkage	0,5/0,7 %	SABIC

Filament specificifications

Property	Value and Tolerances
Diameter 1.75mm	1.75 ± 0.05 mm
Diameter 2.85mm	2.85 ± 0.06 mm
Roundness deviation	max 2%
Suggested print temperature (guideline)	340-360°C
Suggested print speed	30-50 mm/s
Suggested bed temperature	120°C