



3D Industrie
Additive Manufacturing
by Maria & Johannes Lutz



PET-G FILSHAPER

Polyethylene terephthalate with glycol (PET-G) is a derivative of the generally used PET, and it is application in rapid prototyping technologies was found mainly in the production of models for the food industry. Its other properties, such as transparency and good durability, give the possibility of using this material also in other areas, such as the production of tactile panels. The product offered by us is characterized by a printing temperature of 225 ° C and a low shrinkage. The granulate from which our filament is produced has the medical certificate ISO 10993, thanks to which products manufactured with this polymer can be allowed to come into contact with the skin over 30 days.

IDENTIFICATION OF THE SUBSTANCE/MIXTURE

Chemical name of the product	Polyethylene terephthalate glycol
Recommended use	Material for printing in FDM technology
Chemical type	Amorphous thermoplastic polymer
Nominal diameter	1.75 mm

PHYSICAL AND MECHANICAL ATTRIBUTES

Physical attributes		
Description	Value	Test method
Density	1,27 g/cm ³	ISO 1183
Moisture absorption	0,13 %	ISO 62

Mechanical attributes		
Description	Value	Test method
Tensile strength	28 MPa	ISO 527
Tension extension	100 %	ISO 527
Bending strength	68 Mpa	ISO 178
Impact strength	6,2 kJ /m ²	ISO 180
Hardness Shore D	109	ISO 2039-2

Thermal attributes

Description	Value	Test method
Temperature of deflection under pressure 1.8MPa	64°C	ASTM D648
VICAT softening temperature	85°C	ASTM D1525
Print temperature	>225°C	-

Electrical attributes

Description	Value	Test method
Surface resistivity	$10^{16} \Omega/\text{cm}^2$	ASTM D257
Volume resistivity	$10^{15} \Omega \cdot \text{cm}$	ASTM D257

OTHER INFORMATION

Product should be handled in accordance with good industrial hygiene, safety practice and all regulations. The information is being provided solely as a guideline for the safe handling, use, consumption, processing, storage, transportation, disposal and release of the Materials. The information may not be sufficient for such purposes, as it is based on producer's knowledge at the time of creating the document, the user should not place any reliance on the information provided.