

eFil TPU 60D

eFil TPU 60D belongs to the eFil family of flexible TPU-based filaments. Its hardness is Shore 60D, higher than the standard hardness of flexible filaments for 3D printing on the market. The 60D hardness is what we can find in hard rubber parts, in addition to having more elongation. This greater hardness allows working with flexible filaments with the advantage of greater ease of printing.

Its high hardness is recommended for parts that must withstand mechanical stress, especially related to impacts. In addition, its breaking stress is very high, holding up to 40MPa; which allows the models to be applied in real work environments, going from the simple prototype to the fully functional part.

Being made of TPU, the filament has excellent chemical resistance properties to both acids and bases, as well as to a wide variety of solvents. In addition, the TPU plastic has a high resistance to abrasion, impacts and perforations. eFil TPU 60D is capable of withstanding temperatures up to 100°C.

The eFil TPU 60D has great adhesion so your printing does not present warping problems, even without using hot bed or other adhesion methods. This great adhesion provides a perfect union between layers, which creates pieces much more resistant to tearing. This is the perfect elastic filament for use with Bowden-type printing systems, since due to its rigidity it can slide inside the tube without stopping.

Among its applications we can highlight orthopedics, footwear, spare parts, tools and a wide variety of industrial applications. The 60D hardness is the one that we can find in the pieces of the construction games, although with greater elongation. You can improve its performance with a previous drying of 30 to 60 minutes at 90°.

Physical properties	Conditions	Test Method	Typical Values
Density		ASM D792	1,21 g/cc

Thermal properties	Conditions	Test Method	Typical Values
Tg		ASM D3417	-27 °C

Mechanical properties	Conditions	Test Method	Typical Values
100% modulus		D412	17MPa
300% modulus		D412	32 MPa
Tensile strength		D412	40 MPa
Elongation at break		D412	400 %
Tear resistance		D624	170 N/mm

Parámetros de impresión	Typical Values
Printing Temperature	220- 230 °C
Heated Bed temperature	Not necessary
Printing speed	20-40 mm/s
Retraction	4 mm
Adhesion	Spray

Parámetros de calidad	Typical Values
Tolerance	max 0,05 mm
Tolerance	media +/- 0,05 mm
Standard deviation	max 0,02 mm
Ovality	max 2 %

The test values provided in this technical data sheet are to be considered indicative and do not represent any contractual specification. Please note that under certain conditions, properties may be affected. The application, use and processing of our products are the responsibility of the user.