

Technical data sheet PET-G



Description

PET-G (Polyethylene terephthalate glycol-modified) is a globally used copolyester, from plastic water bottles to cloth fibers and it is 100% recyclable.

As a technical material, PET-G provides good mechanical properties and improved chemical and thermal behaviours than PLA but with similar ease of use.

Properties

- Outstanding chemical resistance
- Great dimensional stability and toughness
- Good glossy surface quality
- Good abrasion resistance
- High humidity resistance
- Operating temp. up to 70°C
- Low rate of ultrafine particles (UFP) and volatile organic compounds (VOC)
- Compatible with PVA supports

Recommendations

Plastics absorb moisture from the air, it is recommended to keep the PET-G spools in a box or airtight container with desiccant to keep them dry.

For a better print quality use an enclosure.

PET-G emits low levels of gasses and particles when printed. We recommend printing it in a well-ventilated area.

Filament specifications

Diameter	Ø 2.85 mm
Max roundness deviation	≥ 95%
Net filament weight	750 g
Specific gravity (ISO 1183)	1.27 g/cc

Mechanical properties

	Typical value	Test method
MFR 190°C/2.16 kg	6.4 gr/10 min	ISO 1133
Tensile strength at yield	50.4 Mpa	ISO 527
Strain at yield	5.9 %	ISO 527
Strain at break	22.7 %	ISO 527
Tensile Modulus	2020 MPa	ISO 527
Flexural modulus	2050 Mpa	ISO 178
Flexural strength	69 MPa	ISO 178

Typical value

Test method

	Typical value	Test method
Impact strength-Charpy method 23°C	8,1 kJ/m ²	ISO 179
Rockwell Hardness	105	ASTM D785
Moisture absorption	1104 ppm	ISO 62

Thermal properties

	Typical value	Test method
Heat Deflection Temp	70 °C	ASTM 648
Transparency	90 %	ASTM D1003

Printing settings

Extruder temperature	235 °C - 250 °C
Bed temperature	80 °C
Speed	25-50 mm/s
Retraction speed	60 mm/s
Retraction distance	5 mm
Cooling fan	Up to 60 %
Minimum layer height	0.1 mm

More information about PET-G: <https://www.bcn3dtechnologies.com/en/3d-printer/filaments/#petg>

Disclaimer: The information or assistance included in this document is accepted at your own risk. Neither BCN3D Technologies, Fundació CIM or its affiliates are responsible for the use of this information, and you must determine for yourself if it is adequate for your own use: for the health and safety of your employees and purchasers of your products and for the protection of the environment. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. Those specifications are subject to change without notice. Nothing herein waives any of BCN3D's condition of sale.