Technical data sheet PET-G

Description

PET-G (Polyethylene terephthalate glycol-modified) is a globally used co-polyester, 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

Recomendations

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	⌀ 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
Impact strength-Charpy method 23˚C	8,1 kJ/m²	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