



# **PET-G (Polyethylene Terephthalate Glycol-Modified) Filament**

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**Polyethylene Terephthalate Glycol-modified (PET-G)** PET is the common thermoplastics of the polyester family and is used in fibers for clothing, bottles for liquids and foods. PET-G is a modified PET, PET-G is a clear amorphous thermoplastics with a lower melting point than PET.

The **3D4MAKERS** PET-G Filament has unique properties because it does not come into contact with water during the production process and is directly packaged in a vacuum packaging. These properties make the **3D4MAKERS** PET-G Filament particularly suitable for usage in FDM and FFF 3D printers. The material has an excellent adhesion between layers which results in great improvement of the impact resistance, strength, durability and the printing process.

The PET-G Filament produced by **3D4MAKERS** meets the European regulations EC No. 1935/2004, EC No. 2023/2006 and EC No. 10/2011 concerning plastic materials and articles coming into contact with food. The colorants used by **3D4MAKERS** to colour the Filament also meet these European regulations.

#### Measurements & Tolerance

Size	Diameter tolerance	roundness
1,75 mm Filament	+/- 0,05mm	99%
2,85 mm Filament	+/- 0,06mm	99%

Moisture percentage	< 0,005%	
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#### Physical attributes

Description	Value	Test method
Density	1,29 g/cm <sup>3</sup>	D 792

#### Mechanical attributes

Tensile Stress	53 Mpa	ISO-527-2
Flexural Modulus	2040 Mpa	ISO 178
Impact strenght Notched Izod	4,5 Mpa	ISO 180
Optical Haze	< 1,0%	D 1003

## Printer settings

### Printer settings

Description	Value
Printer nose temperature	210 - 235°C
Heated platform temperature	50 - 80°C

To get the best results while printing we advise you to keep the 3D printer in a room where there is hardly any draft and/or temperature fluctuations. Keep the 3D printer out of the sun. This cannot be a room where people sleep.

When the 3D printer is not being used it is important to keep the 3D4MAKERS PET-G Filament in a bag and stored in a cool, dry and dark place until it is used again.

## Safety information

**REGULATION (EC) No. 1272/2008.** According to EC regulations this product is not classified as hazardous.

**Classification according to EU-directive 67/548/EEC or 1999/45/EC.** According to EC criteria this product is not classified as hazardous.

### COMPOSITION AND INFORMATION ON THE COMPONENTS

#### Mixture

This product is a mixture.

Substance Name	CAS Number	Concentration (%)	Classification Regulation (EC) No. 1272/2008 and Directive 76/548/EEC
Neopentylglycol-ethyleneglycol Terephthalate copolymer	026780-49-4	100 %	Not classified

# Legally Obligated Information

**1** Specific safety, health and environmental regulations and legislation for the substance or mixture.

## **Classification of the substance or mixture**

The substance is not classified as dangerous according to Regulation (EC) no 1272/2008 (CLP/GHS) and Directive 67/548/EEC.

**2 Chemical safety assessment:** Does not apply

**RoHS** (Restriction of Hazardous Substances) and **REACH** (Registration, Evaluation, Authorization and Restriction of Chemicals).

## **Recommended restrictions**

Do not use in medical applications involving permanent implantation in the human body.

The PET-G Filament produced by 3D4MAKERS meets the European RoHS and REACH guidelines.

# Environmental information

Plastic waste can damage the environment. 3D misprints must be separated with plastic waste together with the Filament reel. 3D4MAKERS is developing a return system for 3D misprints and the Filament reel.

**Together we can protect the environment!**

