

PETG Technical & Safety Data Sheet

Product Name: IIID MAX PETG 3D Printing Filament

Date of issue: 4/10/2022

1. Identification of the substance/preparation and of the company

1.1 Trade name: PETG Co-polyester Polyethylene Terephthalate Amorphous Resin

1.2 Use of the product: Biodegradable resin for 3D printing

1.3 Description: PETG / PET-G or Polyethylene Terephthalate Glycol, is a thermoplastic polyester that provides significant chemical resistance, durability, and excellent formability for manufacturing. PETG can be easily vacuumed and pressure-formed as well as heat-bent thanks to its low forming temperatures

1.4 Manufacturer: IIID MAX

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Medley, FL 33178

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2. Hazards identification

2.1 Classification: Not dangerous. The fumes are not toxic, but it's always best to ventilate your printing room properly. There are some carbon emissions from the fumes when printing with PETG, but experts have concluded that they pose no significant health risks.

2.2 Special advice on hazards: May form combustible dust concentrations in air

3. Composition / information on ingredients

3.1 Chemical characteristics: Co-polyester Polyethylene Terephthalate

3.2 Additional information: The polymer contains minor additives such as stabilizers and catalysts. These additives are immobilized by the polymer and are not released with normal use.

4. First-aid measures

4.1 On skin contact: In case of contact with the hot polymer, apply cold water immediately.

Ensure that you have medical aid substances in case you have to remove adhering material and for taking care of burns.

4.2 After inhalation: Remove yourself out of the inhalation zone, and find fresh air. In case of discomfort, call a physician.

4.3 On ingestion: Make sure to rinse your mouth with water. No effects are known. Contact a doctor in case of discomfort.

4.4 On eyes contact: Rinse open eyes thoroughly with water.

5. Fire-fighting measures

5.1 Suitable fire extinguishing: Carbon dioxide, water, and dry chemical extinguisher.

5.2 Special exposure hazards: Product may form explosive dust-air mixtures if a high concentration of product dust is suspended in the air.

5.3 Special protective equipment: Self-contained breathing apparatus, masks, and gloves

5.4 Remark: The accumulations of dust can be inflammable.

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6. Environmental Information

6.1 Biological degradation: Biodegradation and bioaccumulation are unlikely events due to the size of these polymers. While the ester exchange linkage of the polymers has the potential to hydrolyze, their insolubility is expected to prevent significant breakdown under environmental conditions.

6.2 Ecotoxicological effects: Based on their high molecular weight and insolubility, the acute L50 values for aquatic species are expected to be >100 mg/L and >10 mg/L for chronic toxicity.

7. Storage

7.1 Storage: Protect against moisture. Store cool and keep packaging closed when not in use. Avoid sources of ignition. Store in the original container in a dry, cool, and well-ventilated area, away from flame, and ignition sources. Also, avoid direct sunlight or incompatible materials. Maintain good housekeeping to control dust accumulations.

7.2 If your final part should withstand force or torque, your PETG filaments need to be dried. If the relative humidity is around 30% or less, there is no need to dry PETG.

8. Exposure controls & personal protection

8.1 Occupational exposure limits:

OSHA (PEL): 15 mg/m³, 8 Hr. TWA (total dust) - 5 mg/m³, 8 Hr. TWA (respirable fraction) as particulates not otherwise classified (PNOC)

ACGIH (TLV): 10 mg/m³, 8 Hr. TWA (inhalable particles, recommended) - 3 mg/m³, 8 Hr. TWA (respirable particles, recommended)

8.2 Personal Protection : Avoid eating or drinking during working closely with your printers. Avoid contact with hot material with your skin. Avoid inhaling dust and vapors.

9. Physical and chemical properties

9.1 Filament Diameter: 1.75mm

9.2 Print Speed: 20~100 mm/s

9.3 Print Temp: 230°C - 260°C

9.4 Heated Bed Temp: 70°C - 90°C

9.5 Precision: +/- 0,05mm

9.6 Recommended Storage Temperature : -20 to 50 °C / -4 to 122 °F

9.7 Empty Spool: 0.2 kg

9.8 Full Spool: 1.2 kg

9.9 Dimensions: 8.5 × 8.5 × 3 in

10. Regulatory Information

UNITED STATES

10.1 This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200. OSHA Classification: Non-hazardous

10.2 Under RCRA, it is the responsibility of the product user to determine at the time of disposal whether a material containing the product or derived from the product should be classified as Hazardous waste (40 CFR 261.20-24).

10.2.1 If discarded in its purchased form, this product does not meet the RCRA characteristic definition for ignitability, corrosivity, or reactivity and is not an RCRA-listed waste; however, it has not been tested by the Toxicity Characteristic Leaching Procedure (TCLP).

10.3 SARA, Title III: This material is not known to contain extremely hazardous substances.