



SECTION 1 - IDENTIFICATION

COMPANY ADDRESS:
 The Virtual Foundry, Inc
 1471 US HWY 51
 Stoughton, WI 53589
 USA

PRODUCT NAME: MATERIAL Filamet™

SECTION 2 - TYPICAL MATERIAL PROPERTIES

| Physical Properties | Unit | Value |
|----------------------|-------------------|--------------------------|
| Density | g/cc | 7.80 |
| Humidity Absorption | % | No information available |
| Tensile Strength | MPa | 23.3 |
| Tensile Elongation | % | 7.57 |
| Flexural Strength | MPa | 45.5 |
| Flexural Modulus | GPa | 3500 |
| Izod Impact Strength | kJ/m ² | 95.2 |

SECTION 5 - FILAMENT SPECIFICATIONS

| Nominal Diameter | Diameter Tolerance | Ovality |
|---------------------|--------------------|---------|
| 1.75mm | ± 0.05mm | ≥ 95% |
| 2.85mm | ± 0.05mm | ≥ 95% |
| Net Filament Weight | Metal Content | |
| 5000/1000/500 grams | 88.0 - 94.0% | |

SECTION 6 - GUIDELINES FOR PRINTING

| | |
|--|---|
| Advised Printing Temperature | 190-230°C (374 – 446°F) |
| Advised Build Plate Temperature | 40-65°C (104 – 149°F) (Optional) 65°C (149°F) is recommended for glass/G10 build plates |
| Build Plate Surface Type | Powder coated spring steel, glass, G10, blue painter's tape |
| Build Plate Preparation | Powder Coated Spring Steel: No preparation required Glass/G10: Clean with IPA, print at 65°C (149°F) PEI/PC/Fiberglass/Acrylic/Other: Blue painter's tape |



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|-------------------------------|---|
| Print Cooling | Recommended for small details/intricate parts |
| Advised Printing Speed | 60-80mm/sec |
| Nozzle Size/Type | 0.6mm Hardened Steel |

SECTION 10 - ADDITIONAL INFORMATION

This filament is abrasive and will wear standard brass nozzles fast. The Virtual Foundry, Inc recommends a hardened steel nozzle. Gem tipped, stainless steel, titanium and tungsten nozzles have been tested and found to wear quickly.

Sintering Temperature: 2200°C (3992°F) Untested

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REVISED DATE: April 2024