

1471 US HWY 51 Stoughton WI 53589 USA info@thevirtualfoundry.com +1 (608) 509-7146

# **SECTION 1 - IDENTIFICATION**

**COMPANY ADDRESS:** 

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

PRODUCT NAME: Porcelain Filamet™

### **SECTION 2 - TYPICAL MATERIAL PROPERTIES**

Physical Properties	Unit	Value
Density	g/cc	1.40 - 1.50
Ceramic Content	%	48.0 - 52.0

# **SECTION 3 - FILAMENT SPECIFICATIONS**

<b>Nominal Diameter</b>	Diameter Tolerance	Ovality	Net Filament Weight
1.75mm	± 0.05mm	≥ 95%	500 / 250 grams
2.85mm	± 0.05mm	≥ 95%	500 / 250 grams
Pellets	-	-	1000 grams

# **SECTION 4 - GUIDELINES FOR PRINTING**

Advised Printing Temperature	190 - 230°C (374 - 446°F)
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For high speed printers: 235 - 250°C (455 - 482°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

Print Cooling Recommended for small details/intricate parts

Advised Printing Speed 60 - 80mm/sec

For high speed printers: 120 - 130mm/sec

Advised Flow Rate 120 - 135%

Nozzle Size/Type 0.6mm Hardened Steel

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### **SECTION 5 - 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: 1232°C (2250°F) Untested

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