



### **SECTION 1 - IDENTIFICATION**

### **COMPANY ADDRESS:**

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

PRODUCT NAME: High Carbon Iron Filamet™

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

Physical Properties	Unit	Value
Density	g/cc	3.56
Humidity Absorption	%	No information available
Tensile Strength	MPa	No information available
Tensile Elongation	%	No information available
Flexural Strength	MPa	No information available
Flexural Modulus	GPa	No information available
Izod Impact Strength	kJ/m²	No information available

### **SECTION 5 - FILAMENT SPECIFICATIONS**

Nominal Diameter	Diameter Tolerance	<b>Ovality</b>
1.75mm	± 0.05mm	≥ 95%
2.85mm	± 0.05mm	≥ 95%

Net Filament Weight Metal Content

1000/500 grams 75.0 - 80.0%

## **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 0.8mm 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: 1300°C (2372°F) Untested

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