

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	
Metal Content		%	75.0 - 80.0	
SECTION 3 - FILAMENT SPECIFICATIONS				
Nominal Diameter	Diameter Tolerance	Ovality	Net Filament Weight	
1.75mm	± 0.05mm	≥ 95%	1000 / 500 grams	
2.85mm	± 0.05mm	≥ 95%	1000 / 500 grams	
Pellets	-	-	1000 grams	
SECTION 4 - GUIDELINES FOR PRINTING				
Advised Printing Temperature		190 - 230°C (374 – 446°F) 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		0.8mm 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: 1300°C (2372°F) Untested

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REVISED DATE:

March 2025