

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
Filament Density	g/cc	2.90 – 3.85
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: Ensure surface is clean and free of debris Glass/G10: Clean with IPA, print at 65°C (149°F) Other: Blue painter's tape
Print Cooling	Recommended for small details/intricate parts
Advised Printing Speed	60 – 80mm/sec For high speed printers: 120 – 150mm/sec
Advised Flow Rate	110 – 125%
Nozzle Size/Type	1.0mm Hardened Steel

SECTION 5 - ADDITIONAL INFORMATION

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

Sintering Temperature: 1300°C (2372°F) Untested

DISCLAIMER: The information provided in this TDS is correct to the best of The Virtual Foundry, Inc's knowledge. The Virtual Foundry, Inc makes no warranty, express or implied, regarding the accuracy of the data or the results obtained from the use of this product. Nothing herein may be construed as recommending any practice or any product in violation of any law or regulations. The information given is provided as a guidance for good use, handling and processing and is not to be considered as a quality specification. The user is solely responsible for determining the suitability of any material or product for a specific purpose and for adopting any appropriate safety precautions. The information only relates to the specific product and the material properties.

REVISED DATE: August 2026