

SECTION 1 - IDENTIFICATION

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

PRODUCT NAME: Inconel® 718 Filamet™

SECTION 2 - TYPICAL MATERIAL PROPERTIES

Physical Properties	Unit	Value
Density	g/cc	3.23
Metal Content	%	82.0 - 85.0%

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	0.6mm 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. Gem tipped, stainless steel, titanium and tungsten nozzles have been tested and found to wear quickly.

Sintering Temperature: 1260°C (2300°F)

Instructions: <https://thevirtualfoundry.com/debind-sinter/>

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REVISED DATE:

March 2025