

## SECTION 1 - IDENTIFICATION

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

**PRODUCT NAME:** M300 Tool Steel Filamet™

## SECTION 2 - TYPICAL MATERIAL PROPERTIES

Physical Properties	Unit	Value
Density	g/cc	3.85
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/m <sup>2</sup>	No information available

## SECTION 5 - FILAMENT SPECIFICATIONS

Nominal Diameter	Diameter Tolerance	Ovality
1.75mm	± 0.05mm	≥ 95%
Net Filament Weight	Metal Content	
1000/500 grams	84.2%	

## SECTION 6 - GUIDELINES FOR PRINTING

<b>Advised Printing Temperature</b>	190-230°C (374 – 446°F)
<b>Advised Build Plate Temperature</b>	40-65°C (104 – 149°F) (Optional) 65°C (149°F) is recommended for glass/G10 build plates
<b>Build Plate Surface Type</b>	Powder coated spring steel, glass, G10, blue painter's tape
<b>Build Plate Preparation</b>	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
<b>Print Cooling</b>	Recommended for small details/intricate parts

<b>Advised Printing Speed</b>	60-80mm/sec
<b>Nozzle Size/Type</b>	0.6mm 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:** 1260°C (2300°F)      **Instructions:** <https://thevirtualfoundry.com/debind-sinter/>

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**REVISED DATE:** April 2024