



1471 US HWY 51  
Stoughton WI 53589 USA  
info@rapid3dshield.com  
+1 (608) 509-7146

## SECTION 1 - IDENTIFICATION

### **COMPANY ADDRESS:**

Rapid 3DShield, LLC  
1471 US HWY 51  
Stoughton, WI 53589  
USA

**PRODUCT NAME:** Rapid 3DShield Boron Carbide Filament

## SECTION 2 - TYPICAL MATERIAL PROPERTIES

Physical Properties	Unit	Value
Density	g/cc	1.30 - 1.50

## SECTION 3 - FILAMENT SPECIFICATIONS

Nominal Diameter	Diameter Tolerance	Ovality	Net Filament Weight
1.75mm	± 0.05mm	≥ 95%	500 / 250 grams
2.85mm	± 0.05mm	≥ 95%	500 / 250 grams
Pellets	-	-	500 grams

## SECTION 4 - 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>Advised Flow Rate</b>	120 - 135%
<b>Nozzle Size/Type</b>	0.6mm Hardened Steel

## SECTION 5 - ADDITIONAL INFORMATION

This filament is abrasive and will wear standard brass nozzles fast. Rapid 3DShield, LLC recommends a hardened steel nozzle. Gem tipped, stainless steel, titanium and tungsten nozzles have been tested and found to wear quickly.



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**REVISED DATE:** January 2025