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SECTION 1 - IDENTIFICATION

COMPANY ADDRESS:

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

PRODUCT NAME: Silicon Carbide Filamet™

SECTION 2 - TYPICAL MATERIAL PROPERTIES

| Physical Properties | Unit | Value |
|---------------------|------|-------------|
| Density | g/cc | 1.90 |
| Ceramic Content | % | 63.0 - 66.0 |

SECTION 3 - FILAMENT SPECIFICATIONS

| Nominal Diameter | Diameter Tolerance | Ovality | Net Filament Weight |
|------------------|--------------------|----------------|------------------------|
| 1.75mm | ± 0.05mm | ≥ 95% | 1000 / 500 / 250 grams |
| 2.85mm | ± 0.05mm | ≥ 95% | 1000 / 500 / 250 grams |
| Pellets | - | - | 1000 grams |

SECTION 4 - GUIDELINES FOR PRINTING

| Advised Printing Temperature 190 - 230°C (374 – 446°F) |
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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 TypePowder 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

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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: 1860°C (3380°F) Untested

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