

Technical Data Sheets

BCN3D Omega Filaments

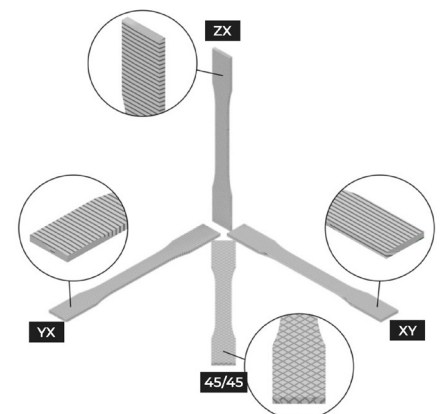


| Material Properties | Test Method | Omega Proto | Omega Resistant Nylon | Omega Tooling CF |
|----------------------------------|-------------|-------------|-----------------------|------------------|
| Density (g/cm ³) | - | 1.27 | 1.2 | 1.23 |
| Glass Transition Temperature, °C | ASTM D3418 | 81 | 76 | 86 |
| HDT B @ 0.45 MPa, °C | ISO 75 | 69 | 100 | 177 |
| HDT A @ 1.8 MPa, °C | ISO 75 | 64 | 65 | 145 |

| Mechanical Properties | Test Method | Omega Proto | Omega Resistant Nylon | Omega Tooling CF |
|---|-------------|-------------|-----------------------|------------------|
| <i>XY Direction</i> | | | | |
| Notched Izod Impact Strength (kJ/m ²) | ISO 180/A | 4.35 | 3.5 | 10.1 |
| Tensile Strength (MPa) | ISO 527-2 | 56 | 99 | 109 |
| Tensile Strain (%) | ISO 527-2 | 6.1 | 5.1 | 2.4 |
| Tensile Modulus (GPa) | ISO 527-2 | 2.3 | 2.5 | 5.9 |
| Flexural strength (MPa) | ISO 178 | 90 | 123 | 165 |
| Flexural modulus (GPa) | ISO 178 | 3.2 | 2.9 | 8.9 |

| | | | | |
|---|-----------|------|-----|-----|
| <i>45-45 Direction</i> | | | | |
| Notched Izod Impact Strength (kJ/m ²) | ISO 180/A | 4.32 | 5.3 | 6.4 |
| Tensile Strength (MPa) | ISO 527-2 | 45 | 77 | 59 |
| Tensile Strain (%) | ISO 527-2 | 2.8 | 5.6 | 1.5 |
| Tensile Modulus (GPa) | ISO 527-2 | 1.9 | 2.4 | 3.7 |
| Flexural strength (MPa) | ISO 178 | 70 | 136 | 119 |
| Flexural modulus (GPa) | ISO 178 | 1.9 | 3.1 | 1.9 |

| | | | | |
|---|-----------|-----|-----|-----|
| <i>ZX Direction</i> | | | | |
| Notched Izod Impact Strength (kJ/m ²) | ISO 180/A | 3.5 | 3.7 | 1.6 |
| Tensile Strength (MPa) | ISO 527-2 | 31 | 53 | 26 |
| Tensile Strain (%) | ISO 527-2 | 1.5 | 4.2 | 1.6 |
| Tensile Modulus (GPa) | ISO 527-2 | 1.6 | 2.2 | 1.9 |
| Flexural strength (MPa) | ISO 178 | 45 | 102 | 51 |
| Flexural modulus (GPa) | ISO 178 | 1.8 | 2.4 | 2.8 |



BCN3D tests are uniquely designed to maximize test performance and printed with full infill and with a 0.4mm tip. All customer parts should be tested in accordance with the customer's specifications. While the descriptions, designs, data, and information contained herein are presented in good faith and believed to be accurate, it is provided for inspiration only. Because many factors may affect processing or application/use, we recommend that you perform independent tests to determine the suitability and proper use of a product for your particular purpose. No warranties of any kind, either express or implied, including warranties of merchantability or fitness for a particular purpose are made regarding products described herein, or that this content may be used without infringing the intellectual property of others. In no case shall descriptions, information, data, or designs described herein be considered a part of our terms and conditions of sale.