



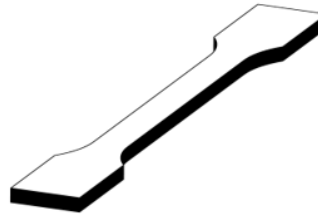
| Physical Properties | Value | Standard |
|---------------------|-----------|----------|
| Density | 1.07 g/cc | ISO 1183 |

Mechanical Properties

TENSILE TEST - STANDARD ISO 527

Test specimens printed on Ultimaker 2+ with the following setup:

- Nozzle type: Olsson Ruby
- Nozzle Temperature: 260 °C
- Heat bed Temp: 70 °C
- Print speed: 40 mm/s
- Infill orientation: 45°



xy

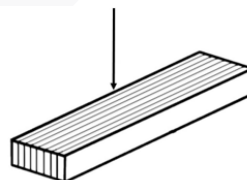
| INFILL | 15% | 50% | 100% |
|-------------------------|------|-------|------|
| Tensile Strength (Mpa) | 32.4 | 36.9 | 64.7 |
| Elastic Modulus (Mpa) | 1501 | 1687 | 2534 |
| Elongation at break (%) | 7.8 | 8.6 | 9.2 |
| Energy at break (J) | 7.92 | 10.36 | 18.7 |

FLEXURAL TEST - STANDARD ISO 178

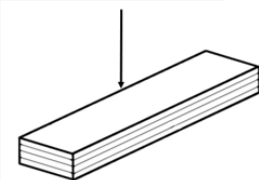
Test specimens printed on Ultimaker 2+ with the following setup:

- Nozzle type: Olsson Ruby
- Nozzle Temperature: 260 °C
- Heat bed Temp: 70 °C
- Print speed: 40 mm/s
- Infill orientation: 45°

zy - parallel



xy - normal



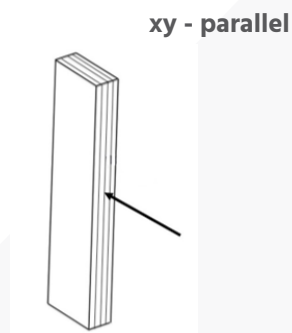
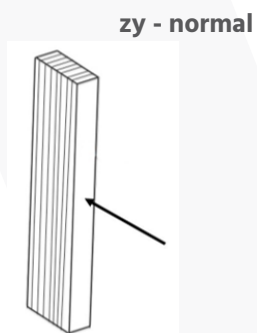
| INFILL | 50% | 100% | 50% | 100% |
|-------------------------|-------|-------|------|-------|
| Flexural Strength (Mpa) | 107.7 | 125.0 | 81.0 | 110.3 |
| Flexural Modulus (Mpa) | 2616 | 3131 | 1969 | 2820 |
| Deformation (%) | 6.0 | 5.9 | 6.2 | 6.2 |



IMPACT TEST IZOD - STANDARD ISO 180

Test specimens printed on Ultimaker 2+ with the following setup:

- Nozzle type: Olsson Ruby
- Nozzle Temperature: 260 °C
- Heat bed Temp: 70 °C
- Print speed: 40 mm/s
- Infill orientation: 45°



| INFILL | 50% | 100% | 50% | 100% |
|--------------------------------------|------|------|------|------|
| Impact Strength (KJ/m ²) | 46.5 | 53.6 | 32.9 | 52.8 |
| Impact Energy (J) | 1.86 | 2.15 | 1.31 | 2.11 |

| Thermal Properties | Value | Standard |
|-----------------------|-------------------------|-----------|
| Melting Point | 180 °C | ISO 11357 |
| Heat Deflection Temp. | 160 °C | ISO 75 |
| Max Usage Temperature | Long Term 90 – 120 °C | ISO 2578 |
| Max Usage Temperature | Short Term 50 °C | ISO 2578 |

| Other Properties | Value | Standard |
|---------------------|----------|-------------|
| Dielectric Strength | 35 kV/mm | IEC 60243-1 |
| Flammability | HB | ISO 1210 |

Filament specifications and print settings

| | |
|-----------------------------|----------------|
| Diameter 1.75mm | 1.75 ± 0.05 mm |
| Diameter 2.85mm | 2.85 ± 0.05 mm |
| Roundness Deviation | max 2% |
| Suggested Print Temperature | 250 – 265 °C |
| Suggested Print Speed | 40 mm/s |
| Suggested Bed Temperature | 60 – 70 °C |
| Cooling Fan | 20-60% |