

## Technical Data Sheet Plexiwire PLA

### Description

Plexiwire PLA is a PLA 3D printing filament for FDM/FFF printers, available in 400m, 300m and 100m.

### Material Properties

|                     |                        |        |
|---------------------|------------------------|--------|
| Specific Gravity    | 1.24 g/cm <sup>3</sup> | D 792  |
| MFR (210°C, 2.16kg) | 6 g/10min              | D 1238 |

### Mechanical Properties

|                           |         |       |
|---------------------------|---------|-------|
| Tensile Strength at Break | 53 MPa  | D 882 |
| Tensile Yield Strength    | 60 MPa  | D 882 |
| Tensile Modulus           | 3.5 Gpa | D 882 |
| Tensile Elongation        | 6,00%   | D 882 |
| Notched Izod Impact       | 16 J/m  | D 256 |
| Flexural Strength         | 83 MPa  | D790  |
| Flexural Modulus          | 3.8 MPa | D790  |

### Thermal Properties

|                              |         |        |
|------------------------------|---------|--------|
| Heat Distortion Temperature  | 55°C    | E 2092 |
| Glass Transition Temperature | 55-60°C | D3418  |

### Guideline for print settings\*

|                         |                  |
|-------------------------|------------------|
| Nozzle temperature      | 200-230°C        |
| Bed temperature         | 40°- 60°C        |
| Active cooling fan      | YES (up to 100%) |
| Layer height**          | 0.05 - 0.30 mm   |
| Shell thickness**       | 0.40 - 2.70 mm   |
| Closed chamber          | not necessary    |
| Dry box                 | not necessary    |
| Ruby or hardened nozzle | not necessary    |

\* settings are based on a 0,4 mm nozzle

\*\* depending on the geometrical complexity

### Filament Specification

|                       |                                                            |
|-----------------------|------------------------------------------------------------|
| Nominal diameter      | 1,75mm                                                     |
| Diameter tolerance    | + - 3%                                                     |
| Ovality               | >= 97%                                                     |
| Netto filament weight | 400m = 1.2kg +-5%, 300m = 0.9kg +-5%,<br>100m = 0.3kg +-5% |