

## Technical datasheet

# Builder PLA

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Builder PLA is a high quality PLA 3D printing filament, which exhibits faster crystallization rates and is able to develop improved heat-resistance in 3D printed parts. Builder PLA is available on large 4,5 kg spools in a limited amount of colors.

### TYPICAL MATERIAL PROPERTIES

| Physical properties <sup>1</sup>       | Unit              | Value   | Method     |
|----------------------------------------|-------------------|---------|------------|
| Specific Gravity                       | g/cm <sup>3</sup> | 1,24    | ASTM D792  |
| Glass Transition Temperature           | °C                | 55 - 60 | ASTM D3418 |
| MFR (210 °C/2.16 kg)                   | g/10 min          | 7-9     | ASTM D1238 |
| Melt Temperature                       | °C                | 165-180 | ASTM D3418 |
| Mechanical properties <sup>2</sup>     | Unit              | Value   | Method     |
| Heat Distortion Temperature (0.45 MPa) | °C                | 80-90   | ASTM E2092 |
| Tensile Strength                       | MPa               | 50      | ASTM D638  |
| Tensile Modulus                        | MPa               | 2315    | ASTM D638  |
| Tensile Elongation                     | %                 | 3.31    | ASTM D638  |
| Notched Izod Impact                    | J/m               | 2.21    | ASTM D256  |

(1) Typical properties for injection molded parts

(2) 3D printed part / 100% in-fill, annealed at 110°C/15 min

### FILAMENT SPECIFICATION

|                              |                           |                  |                          |              |
|------------------------------|---------------------------|------------------|--------------------------|--------------|
| <b>Nominal diameter:</b>     | <b>Diameter tolerance</b> | <b>Ovality</b>   |                          |              |
| 1,75 mm                      | ± 0,1                     | ≥ 95%            |                          |              |
| <b>Available colors:</b>     | <b>EU 10/2011</b>         | <b>FDA CFR21</b> | <b>RoHS (2011/65/EU)</b> | <b>REACH</b> |
| White                        | Y                         | Y                | Y                        | Y            |
| Black                        | Y                         | Y                | Y                        | Y            |
| Red                          | N                         | N                | Y                        | Y            |
| <b>Netto filament weight</b> | 4,5 kg                    |                  |                          |              |

### GUIDELINE FOR PRINT SETTINGS

|                            |              |
|----------------------------|--------------|
| Nozzle temperature         | 195 - 220°C  |
| Bed temperature            | 50 - 60°C    |
| Bed surface / modification | Tape or glue |
| Active cooling fan         | 100%         |
| Print speed                | 40-80 mm/s   |

#### Disclaimer

The product- and technical information provided in this datasheet is correct to the best of our knowledge. The information given is provided as a guidance for good use, handling and processing and is not to be considered as a quality specification. The information only relates to the specific product and the material properties.