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### Product specifications

FormFutura's High Precision PLA is a more dense and resilient PLA filament that is developed for consistent batch-to-batch production via 3D printing. This filament has guaranteed precision on diameter, ovality, shrinkage, and color tolerances. The diameter and ovality of High Precision PLA filament are measured via a continuous 3-axis laser measurement. A 3-axes measurement is far more accurate and ensures that there are no blind spots around the diameter. High Precision PLA filaments are colored RAL specific with a max tolerance of Delta E5. All parameters of each individual spool can be checked by scanning the QR code on the spool.

### Important key features

- Certificate of analysis / data report per spool
- Precise RAL color matched filament.
- Continuous 3-axis laser measurement
- More dense and resilient than standard PLA
- 3D prints with high detail and surface quality.

### Suitable applications

- Batch to batch productions.
- Household appliances
- Manufacturing aids.
- Visualization aids

### Material properties

	Typical value	Test Method
Density	1.27 g/cm <sup>3</sup>	ISO 1183-1
Melt flow rate, 190°C/2,16kg	2,13 g/10 min	ISO 1133-1

### Mechanical properties

Tensile modulus (23°C, 1mm/min)	2971 MPa	ISO 527
Tensile strength at yield (23°C, 50mm/min)	68 MPa	ISO 527
Elongation at tensile yield (23°C, 50mm/min)	3,3%	ISO 527
Tensile strength at break (23°C, 50mm/min)	52 MPa	ISO 527
Elongation at tensile break (23°C, 50mm/min)	4,6%	ISO 527
Flexural strength	192 MPa	ISO 178
Strain at flexural yield	1,4%	ISO 178
Flexural strength at break	115 MPa	ISO 178
Strain at flexural break	10%	ISO 178
Charpy unnotched impact strength, 23°C	30 kJ/m <sup>2</sup>	ISO 179/1eU

### Thermal properties

Glass Transition Temperature	58°C	ISO 11357-1
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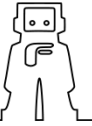
### Storage and handling

Filament should be stored at room temperature in a dry and dark place with humidity below 15%. Recommended storage temperature is ca. 18-25°C (64.4 -77.0°F). Keep out of moisture, sunlight and direct heat. When stored properly, product has a shelf life of 24 months. To obtain the best parameters of the printed object, it is recommended to dry the material prior to usage and to 3D print it directly from a dry box.

### Product export information

HS Code	Description	Origin
39169090	Monofilament for 3D printing	European Union





### Disclaimer

*The product- and technical data provided in this datasheet is correct to the best of FormFutura BV's knowledge and are intended for reference and comparison purposes only. Actual values may vary according to printing conditions, model complexity, environmental conditions, etcetera. Typical values are indicative only and are not to be construed as being binding specifications. All other information supplied, including that herein, is considered accurate but is furnished upon the express condition that the customer shall make its own assessment to determine a product's suitability for a particular purpose. We make no warranty, express or implied, including regarding any information supplied or the data upon which it is based or the results to be obtained from the use of such products or information, or concerning product, whether of satisfactory quality, merchantability, fitness for any particular purpose or otherwise, or with respect to intellectual property infringement as a result of use of information or products, and none shall be implied.*

