



# PLA

## AFFORDABLE AND VERSATILE PROTOTYPING

MADE FOR

-  bigrep **ONE**
-  bigrep **PRO**
-  bigrep **STUDIO**

COMPATIBLE  
**FFF 3D PRINTERS**

BigRep's PLA is a well-rounded filament ideal for **large-format rapid prototyping** for consistent results at an **affordable price**. Optimized for the specific challenges of large-scale 3D printing, BigRep PLA surpasses lower-cost competitors that offer PLA filaments formulated for desktop printers.

With low moisture absorption and minimal shrinkage, parts printed with BigRep PLA demonstrate minimal warping and **reliable results**. It is easy to print and perfect for design iterations in the prototyping phase of nearly any application.

BigRep PLA is a biopolymer with **reduced environmental impact**, especially compared to filaments derived from fossil fuels. Natural-colored PLA is FDA **compliant for food safety** and meets all requirements of EU Directives on food contact.



Most Affordable for  
Cost Savings



Low Moisture  
Absorption



Easy to Print for  
Wide Range of Uses



Minimal Shrinkage  
for Part Accuracy



Reduced  
Environmental Impact



PHYSICAL PROPERTIES	TEST METHOD	VALUE
Density	ISO 1183	1.24 g/cm <sup>3</sup>
Filament Diameter	-	2.85 mm +/- 0.05
Color Availability	-	Black, Grey, Natural, Orange, Purple, Red, White, Yellow
Filament Net Weight	-	2.5, 4.0, 8.0 kg
MECHANICAL PROPERTIES	TEST METHOD	VALUE
Tensile Strength	ISO 527	60 MPa
Tensile Modulus	ISO 527	3500 MPa
Elongation at Break	ISO 527	4%
Flexural Strength	ISO 178	80 MPa
Flexural Modulus	ISO 178	3800 MPa
Charpy Unnotched Impact Strength	ISO 179	7.5 kJ/m <sup>2</sup>
Charpy Notched Impact Strength	ISO 179	2 kJ/m <sup>2</sup>
THERMAL PROPERTIES	TEST METHOD	VALUE
HDT - B - 0.45 MPa	ISO 75	60°C
HDT - A - 1.8 MPa	ISO 75	55°C
Glass Transition Temperature (Tg)	DSC	60°C
Melting Temperature (Tm)	DSC	155-160°C
<b>COMPLIANCE</b>	<input checked="" type="checkbox"/> REACH Compliant <input checked="" type="checkbox"/> RoHS Certified <input checked="" type="checkbox"/> FDA Compliant <small>(natural color only)</small>	

PROPERTIES	RECOMMENDED USAGE
Nozzle Temperature	200 - 230°C
Bed Temperature	50 - 70°C
Printer Compatibility	BigRep ONE, BigRep PRO, BigRep STUDIO, BigRep STUDIO G2
Fan Speed	75 - 100%
Surface Adhesion	<ul style="list-style-type: none"> <li>Kapton (additional adhesion using glue, e.g. Magigoo)</li> <li>BigRep SWITCHPLATE</li> </ul>
Drying	PLA is slightly hygroscopic. Recommended drying at 50°C for 4 - 6 hours.
Storage and Shelf Life	Keep dry, avoid sunlight, and store at room temperature. Use BigRep SHIELD for best results. When stored properly, product has a shelf life of 24 months.
Handling	Use the BigRep Keep-Dry Box for best material printability.
Post-Processing	Wear gloves to avoid possible microdamage to skin. Use a dust mask and protective glasses when processing.
Support	<ul style="list-style-type: none"> <li>Breakaway</li> <li>BigRep BVOH</li> </ul>