

## MakerPoint PLA

MakerPoint TPLA an easy to use high grade color changing PLA type of filament. The dark grey color will change to natural above 29°C, but much faster above 33°C or higher. TPLA is a slightly modified PLA, so it is tougher and less brittle as regular PLA. Due to a low shrinkage factor PLA will not deform after cooling.

PLA (Poly Lactic Acid) is a biodegradable plastic made from renewable natural resources and one of the most popular materials for 3D printing.

### Features:

- Color changing gray-natural > 33 °C
- Tougher and less brittle compared to regular PLA
- Easy to print at low temperature
- Low warping
- Biodegradable
- Limited smell

Dimensions		
Size	Ø tolerance	Roundness
1,75mm	± 0,05mm	≥ 95%
2,85mm	± 0,10mm	≥ 95%

Colors
MakerPoint TPLA is available from stock in thermochrome dark grey

3D-printing	
Description	Typical value
Printing technology	FFF
Printing temp.	180-210°C
Heated bed temp.	± 35-60°C (when available)
Cooling fan	100%
Flow Rate	100%

Physical properties		
Description	Test method	Typical value
Density	ASTM D1505	1,24 g/cc
MFI	-	6,0 g/10 min
Tensile strength	ASTM D882	110 MPa (MD) 145 MPa (TD)
Elongation at break	ASTM D882	160% (MD) 100% (TD)
Tensile modulus	ASTM D882	3310 MPa (MD) 3860 Mpa (TD)
Impact Strength	-	7,5 KJ/m <sup>2</sup>

Last change: 2014-03-31

The data correspond to our knowledge and experience at the time of publication. They do not on their own represent a sufficient basis for any part design, neither do they provide any agreement about or guarantee the specific properties of a product or part or the suitability of a product or part for a specific application. It is the responsibility of the producer or customer of a part to check its properties as well as its suitability for a particular purpose. This also applies regarding the consideration of possible intellectual property rights as well as laws and regulations. The data are subject to change without notice as part of MakerPoints continuous development and improvement processes.

Thermal properties		
Description	Test method	Typical value
Melting temp.	-	210°C ± 10°C
Melting point	ASTM D3418	145-160°C
Vicat softening temp.	ISO 306	± 60°C

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