

ICE FILAMENTS PLA+ PRODUCT CARD

ICE Filaments PLA+ is our industrial high-performance PLA which features extreme performance on speed, mechanical properties and high heat environments. PLA+ is perfect for printing speeds of > 120mm/s, allowing you to be more efficient in the same time. Users who use a lot of ABS now have a bio-based alternative with all the advantages of ABS and none of the disadvantages like shrinking and delamination. Due to the composition of PLA+ the material is already highly crystalline after printing, which increases the stiffness of the material at higher temperatures. When you combine this with annealing, PLA+ reaches an HDT of 95°C+. Compared to other high temp. resistant PLA types, PLA+ has the USP of negligible small shrinkage after annealing. PLA+ has been specifically engineered for industrial applications where you want an easy to print filament with high mechanical properties.

FEATURES:

- ∞ Prints like PLA, performs like ABS
- ∞ Engineered for fast printing (> 120mm/s)
- ∞ ABS Matching mechanical properties
- ∞ Great heat resistance at higher temperatures
- ∞ HDT after annealing 95°C+
- ∞ Negligible shrinkage after annealing



COLOURS:

ICE Filaments PLA+ is available in 6 colors



FILAMENT SPECS		
Size	Ø tolerance	Roundness
1.75mm	± 0,05mm	≥ 95%
2.85mm	± 0,10mm	≥ 95%

MATERIAL PROPERTIES		
Description	Testmethod	Typical value
Specific Gravity	ISO 1183	1,27 g/cc
MFI 210°C/2,16kg	ISO 1133	6g/10 min*
Tensile strength	ISO 527	39 Mpa
Elongation at break	ISO 527	58%
Tensile Modulus	ISO 527	3900 Mpa
Impact strength – Charpy notched 23°C	ISO 179	22 kJ/m ²
Printing temperature	ICE FILAMENTS	220 – 250°C <i>based on speed</i>
Melting temperature		190 – 220°C
Heat deflection temp. (after annealing)	ISO 75	95°C+ **

ADDITIONAL INFO:

PLA+ can be printed without heated bed. If you have a heated bed, the recommended temperature is ± 50 – 60°C. ICE Filaments PLA+ adheres to any print service though we always recommend some adhesive or a print sticker. ICE Filaments PLA+ can be used on most common desktop FDM or FFF technology 3D printers. Storage: Cool and dry (15 – 25°C) and away from UV light. This enhances shelf life significantly.

*Viscosity is lower (higher MFI) at a higher printing temperature (240°C ±10°C), which increases the printing speed capabilities.

** These results are preliminary and are based on several tests made in-house. Current values should be considered factual.