

Bioplastics product profile

PLA extruded filament for FDM/FFF 3D printing



Luminy® PLA for 3D printing filament:

- Biobased & biodegradable
- Exceptional resolution while printing
- Improved heat resistance
- Impact resistance comparable to ABS
- PLA resins food contact approved (USA & Europe)

Our partners¹ have successfully launched a range of PLA (Poly Lactic Acid) 3D printing filaments based on Luminy® neat PLA resins from Total Corbion PLA. The final filaments show improved and unique characteristics compared to existing filaments on offer today, and boast a lower carbon footprint and higher biobased content compared to ABS alternatives.

The final parts showed exceptional visual qualities, described as 'glittering' and 'sparkly' effects, along with excellent print resolution. Tests have confirmed that parts printed with filaments based on Luminy® PLA L175 resin display improved heat resistance compared to standard PLA filaments². Furthermore, we have compounds available for sampling that result in a comparable impact resistance to ABS, please contact us for more information.

Manufacturers have been recommended to focus on designing new types of low-emission, PLA-like filament materials³ for which Corbion's neat PLA resins provide an excellent basis.

High heat PLA from Total Corbion PLA results in improved heat resistance in the final part
3D printed cat after 1 hour at 80°C²



Standard PLA filament

High heat PLA filament based on Luminy® PLA L175 from Total Corbion PLA

¹ Data results visual characteristics and printed parts courtesy of Fillamentum. ² Results based on Total Corbion PLA data. ³ Emissions of Ultrafine Particles and Volatile Organic Compounds from Commercially Available Desktop Three-Dimensional Printers with Multiple Filaments. Parham Azimi, Dan Zhao, Claire Pouzet, Neil E. Crain, and Brent Stephens. Environmental Science & Technology 2016 50 (3), 1260-1268. DOI: 10.1021/acs.est.5b04983.

Total Corbion PLA is a global technology leader in Poly Lactic Acid (PLA) and lactide monomers. PLA is a biobased and biodegradable polymer made from annually renewable resources, offering a reduced carbon footprint versus many traditional plastics. The Luminy® PLA portfolio, which includes both high heat and standard PLA grades, is an innovative material that is used in a wide range of markets from packaging to consumer goods, fibers and automotive. Total Corbion PLA, headquartered in the Netherlands, will start up a new production plant in Thailand in the second half of 2018. The company is a 50/50 joint venture between Total and Corbion.

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