



HIGHEST RATED FILAMENT ON AMAZON
60-DAY MONEY BACK GUARANTEE

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Description:

rigid.ink Flexible PLA is a strong and flexible biodegradable⁽¹⁾ polyester filament that is ideal for use in applications where vibration is a problem or where objects made from rigid plastics are unsuitable.

Has strong resilience and tear resistance, excellent inter-layer adhesion, a low coefficient of friction, and good thermostability.

Applications:

Car parts (not tyres - see low COF), seals, toys, vibration isolation mounts, protective covers, castor wheels, delineators, timing belts.

Recommended Print Settings:

Printing Temps 1.75mm	240-250°C
Printing Temps 2.85mm	240-250°C
Heated Bed Temp	30-60°C
Cooling Fans	After 1st layer, 30-100%/as needed
Ideal Build Volume	Doors and covers open/removed
Extrusion Multiplier	x1.0-1.1 (100-110%)
Retraction (direct drive)	Try 2-3mm as a starting point at 20-30mm/s
Retraction (bowden feed)	As above, but try 6mm as a starting point
Print Speed Advisory	<30mms (depends on printer extruder configuration)
Print Surface Advisory	PEI and FR4/PrintBite and BuildTak bed surfaces are susceptible to serious over-adhesion issues if the first layer is printed too close to the bed (the use of a 'moderator' between the bed surface and the FPLA is advised - glue stick, 3DLAC, vinyl hairspray, etc. Also, increasing the air-gap between the nozzle for the first layer and the bed - do not 'squish' the first layer into the bed)
Print Layer Advisory	None
Other	Some bowden feed systems may not be able to print with this filament (2.85mm diameter filament may have better results as it is more rigid than 1.75mm)

General Advice:

Start at the low end of the temperature range and increase if needed for faster print speeds

Print without supports if possible as they are hard to remove

Properties:

Typical Properties ⁽ⁱ⁾	Value
Density	1.25-1.27g/cm ³
Glass Transition Temperature	50-55°C
Hardness Shore D	32D
Melting Temperature	110-120°C
Vicat Softening Point	91°C
Tensile Strength, Yield	35-44 MPa / 5080-6380 psi

(i) NOT to be construed as specifications

Safety Information:

The material that rigid.ink Flexible PLA is made from is in its composition one of the few compostable polymers complying with the requirements of the European food contact regulation ⁽²⁾ as well as the requirements of the US Food Contact Substance Notification ⁽³⁾.

Other Info:

Wide hardness range

Excellent abrasion and scratch resistance

High elasticity

High tensile & tear strength

Recyclable

Adhesion to polar substrates

Print Surface Materials:

Adheres very strongly to PEI and FR4 bed materials. Care must be taken to ensure that the bed surfaces are not damaged by over-adhesion. It is advised that an adhesion moderating coating is applied to these surfaces. Do not 'squish' the first layer into the bed surface.

(1) Certified Compostable (industrial) Standards: European - EN 13432, American - ASTM 6400, Australian - AS 4736, Japanese - GreenPla

(2) Commission Regulation (EU) No. 10/2011 of January 14, 2011 on materials and objects of plastic, designed to be in contact with food

(3) According to Food Contact Substance Notification No. 907 of FDA

Please note that the information given in this Technical Data Sheet, including, but not limited to, data, statements and typical values, are given in good faith. They are provided as an aid for material selection purposes only. The values and information presented on this sheet are typical values and should not be interpreted as being absolute or precise specifications. Colour pigments may induce variance in printing settings between filament colours.