SAKATA 3D PLA 850 is a biodegradable filament that significantly improves the mechanical and thermal properties of standard PLA. It is specifically formulated for FDM/FFF 3D printers. Its more crystalline molecular structure allows its mechanical and thermal resistance to be increased by baking or annealing (post-processing). It provides parts with excellent surface aesthetic quality and resolution. It is available in more than 50 colours and different surface finishes. Suitable for outdoor applications once annealed. Ideal for 3D printing decorative objects, toys, containers, handles, supports, gadgets, advertising material, more resistant and durable prototypes, and art pieces and sculptures with greater detail and strength. Suitable for both classic and high-speed printers. Made in Spain by POLIMERSIA GLOBAL S.L.

FILAMENT SPECIFICATIONS	Unit	Value
Diameter	mm	1.75 ± 0.03 / 2.85 ± 0.05
Max. roundness deviation	mm	0.03 / 0.05
Net weight	g	1,000

PHYSICAL PROPERTIES	Standard	Unit	Value
Specific gravity	ASTM D792	g/cm3	1.24
MECHANICAL PROPERTIES	**Standard**	**Unit**	**Value**
Tensile modulus (1)	ASTM D638	MPa	2,315
Tensile strength (1)	ASTM D638	MPa	50
Elongation at break (1)	ASTM D882	%	3.31
Izod notched impact strength (1)	ASTM D256	J/m	118
THERMAL PROPERTIES	**Standard**	**Unit**	**Value**
HDT (0.45 MPa) (1)	ASTM E2092	ºC	80 - 90

(1) 3D printed part / 100% in-fill, annealed at 110ºC/15 min.

PRINT SETTINGS (1)	Unit	Value
Nozzle temp.	ºC	Classic printers: 205 - 220 High speed printers: 220 - 240
Type of nozzle	-	Brass
Bed temp.	ºC	> 45
Type of bed	-	Glass or PEI
Bed treatment	-	Adhesive spray or stick when needed
Closure chamber	-	Not needed
Cooling fan	%	100
Layer height	mm	0.08 – 0.2
Print speed	mm/s	Classic printers: 50 - 100 High-speed printers: 100 – 350 (2)
Max. volumetric speed	mm^3/s	24 (2)
Dry specification	Before printing	4 – 6 hours at 55 ºC (optional)
	During printing	55 ºC (optional)

(1) Settings are based on a 0.4 mm nozzle.

(2) Nozzle temperature: 240 ºC.

Certifications / Approvals

SAKATA 3D PLA 850 filament is not certified for food contact either medical applications.

Safety Considerations

Good general ventilation of the workplace is recommended.

Disclaimer

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