SAKATA 3D FILAMENTS®

PET-G V0

Ficha Técnica
Technical Data sheet

SAKATA 3D PET-G V0 filament is a 3D printing compound based on Glycol modified Polyethylene Terephthalate (PET-G) with a flammability V-0 according to UL 94. This material is free of halogens-based flame retardants and red phosphorous and does not contain any per- and polyfluoroalkyl substances (PFAS-free product). It shows similar properties than standard PET-G: easy to print, low shrinkage, high-temperature resistance, dimensional stability, good layer adhesion and mechanical properties. Ideal for applications where fire resistance is important, electronic components, prototyping. Made in Spain by POLIMERSIA GLOBAL S.L.

FILAMENT SPECIFICATIONS	Unit	Value
Diameter	mm	1.75 ± 0.03
Max. roundness deviation	mm	0.03
Net weight	g	1.000

PHYSICAL PROPERTIES	Standard	Unit	Value
Density	ISO 1183	g/cm^3	1.26
MECHANICAL PROPERTIES	**Standard**	**Unit**	**Value**
Tensile modulus (1)	ISO 527	MPa	2,350
Tensile strength (at yield) (1)	ISO 527	MPa	40
Elongation at break (1)	ISO 527	%	40
Charpy unnotched impact strength (1)	ISO 179	KJ/m^2	NB
Charpy notched impact strength (1)	ISO 179	KJ/m^2	3
THERMAL PROPERTIES	**Standard**	**Unit**	**Value**
HDT (0.45 MPa) (1)	ISO 75	ºC	63
HDT (1.8 MPa) (1)	ISO 75	ºC	58
VICAT (1)	ISO 306	ºC	70
FLAMMABILITY	**Standard**	**Unit**	**Value**
Oxygen Index (1)	ASTM D 2863	%	35
Flammability rating 1.5 mm thickness (2)	UL 94	rating	V-0
Flammability rating 3.0 mm thickness (2)	UL 94	rating	V-0
Glow Wire Flammability Index (1)	IEC 60695-2-12		960@1mm
Glow Wire Flammability Index (1)	IEC 60695-2-12		960@2mm
Glow Wire Ignition Test (1)	IEC 60695-2-13		775@1mm
Glow Wire Ignition Test (1)	IEC 60695-2-13		775@2mm
ELECTRICAL PROPERTIES	**Standard**	**Unit**	**Value**
Comparative Tracking Index – solution A (1)	IEC 60114	V	600

NB: No break.

(1) Injection moulding bars.

(2) 3D Printed flame bars 125(±5) x 13.0(±0.5) mm.

PRINT SETTINGS [1]	Unit	Valor
Nozzle temp.	ºC	Classic printers: 235 - 255 High speed printers: 245 - 265
Type of nozzle	-	Brass
Bed temp.	ºC	60 - 70
Type of bed	-	Glass or PEI
Bed treatment	-	Adhesive spray or stick
Closure chamber	-	Not necessary
Cooling fan	%	30 - 60
Layer height	mm	0.12 – 0.32
Print speed	mm/s	Classic printers: < 40 High speed printers: 80 - 320
Max. volumetric speed	mm^3/s	16 [2]
Dry specification	Before printing	4 – 6 hours at 60 ºC (recommendable)
	During printing	60 ºC (optional)

[1] Settings are based on a 0.4 mm nozzle.
[2] Nozzle temperature: 265ºC.

Certifications / Approvals

The filament is not certified for food contact either medical applications.
The filament is not certified by Underwriters Laboratories and has no UL number.

Safety Considerations

Good general ventilation of the workplace is recommended.

Disclaimer

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