

SAKATA 3D PA-GF20-FR (Nylon) filament is a 20% glass fiber reinforced and heat stabilized copolyamide with a flammability V-2 according to UL94. This engineering-grade material has been designed specifically for industrial applications. The glass fiber reinforcement improves dimensional stability, reduces shrinkage, lift, and warp. This material shows excellent mechanical and thermal properties (HDT of 180°C) while offering ease of printing. Ideal when printing functional prototypes, molds, tools and production parts. 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	850

PHYSICAL PROPERTIES	Standard	Unit	Value
Density	ISO 1183	g/cm ³	1.31
Moisture absorption	ISO 62	%	1.5
Water absorption	ISO 62	%	6.0
MECHANICAL PROPERTIES	Standard	Unit	Value (dry/cond.)*
Tensile modulus	ISO 527	MPa	5,000 / -
Tensile strength	ISO 527	MPa	80 / -
Elongation at break	ISO 527	%	3 / -
Flexural modulus	ISO 178	MPa	4,000 / -
Flexural strength	ISO 178	MPa	110 / -
Charpy unnotched impact strength	ISO 179	KJ/m ²	25 / -
Charpy notched impact strength	ISO 179	KJ/m ²	4 / -
FLAMMABILITY	Standard	Unit	Value
Flammability (0.8 mm)	UL-94	Class	V-2
Flammability (1.5 mm)	UL-94	Class	V-2
Glow wire flammability index (1.5 mm)	IEC 60695-2-12,13	°C	960
THERMAL PROPERTIES	Standard	Unit	Value
HDT (0.45 MPa)	ISO 75	°C	180
PROPIEDADES ELÉCTRICAS	Standard	Unit	Value
CTI (comparative tracking index)	IEC 60112	V	600
Volume resistivity	IEC 60093	Ohm*m	10E13
Surface resistivity	IEC 60093	Ohm	10E14

* dry = dry as moulded / cond.= conditioned according to ISO 1110

PRINT SETTINGS	Unit	Value
Type of printer	-	Enclosed
Nozzle temp.	°C	235 - 260
Type of nozzle	-	Hardened steel
Bed temp.	°C	> 65
Type of bed	-	Glass or PEI
Adhesive	-	Yes
Fan speed	%	0
Layer height	mm	0.02
Print speed	mm/s	30 - 100
Dry specification	Before printing	> 8 hours at 70 °C (drybox)
	During printing	70 °C (drybox)

Certifications / Approvals

SAKATA 3D PA-GF20-FR 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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