



Material DataSheet PLENE GLASS FIBER

TDS Nr.: 5050

Rev. 3.0 25/03/2025

Main features

Low warpage

Impact resistance

Low water absorption

High-strength and stiffness parts with low creep

Physical properties

Physical properties	Test method	Specimen	Units	Typical value
Specific gravity	ISO 1183		g/cm ³	1.34
Water absorption			%	<0.3

Mechanical Properties at 23°C

Tensile strength	ISO 527		MPa	54
Tensile modulus	ISO 527-1/-2		MPa	8700
Impact strength	ISO 179/1eU		Kj/m ²	35
Impact strength notched	ISO 179/1eA		Kj/m ²	7.5
Flexural modulus	ISO 178		GPa	6
Flexural strength	ISO 178		MPa	78
Flexural elongation F. max.	ISO 178		%	1.5
Elongation F. max.	ISO 527		%	1.2

Thermal properties

Heat distortion temperature	ISO 306		°C	138
Continuous service temperature	UL 746B		°C	100

Electrical properties

Insulation resistance	DIN/IEC 60167		ohm	≤10 ³⁻⁷
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SUGGESTED PRINT SETS (1)

Suggest print sets	Unit	Value	Test method
Extruder temp	C°	255-270	Internal
Plate temp	C°	50	Internal
Min. nozzle diameter (2)	mm.	0,5	Internal
Fan	%	0	Internal
Print speed	mm/l°	35 - 45	Internal

ADDITIONAL INFORMATIONS

In general filaments made with PLENE GLASS FIBER can be processed on conventional 3D printer using FDM / FFF technology.

PLENE GLASS FIBER is a special polypropilene glass fiber reinforced developed for 3D printing and to obtain best results we recommend pre drying the filaments at 80° for 2 h. Increase drying time for spools up 1 kg.

Don't leave the filament stopped inside the nozzle more than 20 min. If that down the temperature under 210°, better stop the thermal control.

(1) Suggested print set merely represent a recommendation for general use . Every printer necessity a specific set , nozzle temp, bed temp, etc .

(2) 0.5 mm is the minimum diameter of the nozzle with carbon fibers reinforced. Carbon fibers are abrasive, we suggest to use a nozzle in hardened or tempered metal, like Widia, or wear resistance internal surface, like ceramics or other.
NO tefloned surface!

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