TECHNICAL DATA SHEET

VERSION 1.2
REVISION: 20/03/2023

PINE

It is a PLA filament with a high load of pine wood fibers, it is biodegradable and compostable. Thanks to the wood particles the surface finish of the pieces is similar to natural wood. This results in a nice colour and organic feel.

Recommended for decoration, prototyping, design, and pieces that require an aesthetics and feel similar to wood.

Allow for all printers

Biodegradable

Compostable

	VALUES		UNIT OF MEASUREMENT	STANDARD
PHYSICAL PROPERTIES				
Chemical composition	PLA compound with pine wood.			
Density	1,09		g/cm^3	ISO 1183
MECHANICAL PROPERTIES [1]	XY PLANE	XZ PLANE		
Tensile strength	32,4	12,8	MPa	ISO 527
Traction module	2944,4	1841,9	MPa	ISO 527
Flexion strength	65,2	23,8	MPa	ISO 178
Flexion module	3304	1737,2	MPa	ISO 178
Elongation at maximum effort	1,2	0,8	%	ISO 527
Elongation by traction at break	1,2	0,8	%	ISO 527
Elongation by flexion at break	2,5	3,3	%	ISO 178
Charpy impact force (no notch)	-	-	kJ/m^2	ISO 179
Hardness	82,4		Shore D	ISO 7619 – 1

[1] Values obtained in printed specimens, nozzle 0,6 mm, 100% rectilinear filling, layer height 0,2 mm for more information, please contact us by email at info@smartmaterials.com or visit our website www.smartmaterials3d.com

THERMAL PROPERTIES			
Glass transition temperature (Tg)	59	˚C	ISO 11357
VICAT B (50 N 50˚C/h)	57	˚C	ISO 306
HDT B (0,45 MPa)	59	˚C	ISO 75
PRINTING PROPERTIES			
Printing temperature	200 – 230	˚C	
Bed temperature	40 – 60	˚C	
Layer fan	100	%	
Print speed	25 – 50	mm/s	
Material flow	100	%	
Layer height	≥ 0,2	mm	
Nozzle recommendations	≥ 0,6	mm	

SIZE	NET WEIGHT	GROSS WEIGHT	DIAMETER	COLOR	PACKAGING
M	750 g	1065 g	1,75 mm/2,85 mm	Natural	Cardboard box, cardboard coil, vacuum bag, desiccant.

NOTICE: The information provided in the data sheets is intended for reference only. It should not be used as design or quality control values. Actual values may differ significantly depending on printing conditions. The final performance of printed components is not only material dependent, design and printing conditions are also important.