

OYSTER

Smartfil Oyster is a high quality biodegradable and compostable 3D printing filament, obtained with a base of thermoplastic material and a load from the reuse of organic waste such as crushed oyster shell. We have developed a filament, which also favors the circular economy and improves environmental quality. Due to the nature of the filaments from organic waste, the color tone can vary on the spools or between batches.



Recyclable
Recyclable
Recyclable



Biocompostable
Biocompostable
Biocompostables

	TIPICAL VALUE	UNITS	TEST METHOD		
PHYSICAL PROPERTIES					
Chemical Name	Compound PLA with oyster shell				
Material Density	1.54	g/cm ³	ISO 1183		
MECHANICAL PROPERTIES					
Tensile Strength	42.3	MPa	ISO 527		
Flexural strength	74.9	MPa	ISO 178		
Tensile Modulus	3403	MPa	ISO 527		
Flexural Modulus	3690	MPa	ISO 178		
Elongation at break	1.5	%	ISO 527		
Hardness	87.2	Shore D	ISO 7619-1		
PRINTING PROPERTIES					
Print Temperature	200-230	°C			
Hot Pad	0-40	°C			
Fan Layer	100	%			
Print Speed	25-45	mm/s			
Flow	100	%			
Layer Height	≥ 0.2	mm			
Recommended Nozzle Size	≥ 0.6	mm			
SIZE					
SIZE	NET W.	GROSS W.	DIAMETERS	COLOR	PACKAGING
M	750 g	1065 g	1.75 mm/2.85 mm	Natural	Carton box, carton spool, vacuum bag, desiccant bag

USE RECOMENDATIONS

HEATED BASE RECOMMENDATIONS

It is recommended to maintain a stable temperature during printing, for printers without a heated bed, the use of adhesive tape or lac for 3D printing is recommended to achieve better adhesion with the base.



DISCLAIMER: The information provided in the data sheets is intended to be just a reference. It should not be used as design or quality control values. Actual values may differ significantly depending on the printing conditions. The final performance of the printed components does not only depend on the materials, also the design and printing conditions are important.
Smart Materials assumes no responsibility for any damage, injury or loss produced by the use of its filaments in any particular application.