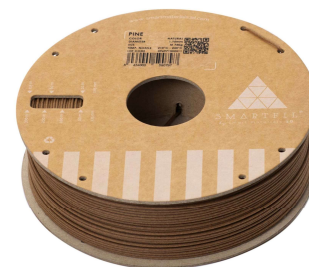


## PINE

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.



Recyclable  
Recyclable  
Recyclable



Compostable  
compostable  
compostables



Biodegradable  
Biodegradable  
Biodegradable

|   | TIPICAL VALUE                | UNITS             | TEST METHOD       |
|---|------------------------------|-------------------|-------------------|
| <b>PHYSICAL PROPERTIES</b>                  |                              |                   |                   |
| Chemical Name                               | Compound PLA with pine wood. |                   |                   |
| Material Density                            | 1.09                         | g/cm <sup>3</sup> | ISO 1183          |
| <b>MECHANICAL PROPERTIES <sup>(1)</sup></b> |                              |                   |                   |
|   | AXIS XY                      | AXIS XZ           |                   |
| Tensile Strength                            | 32.4                         | 12.8              | MPa               |
| Tensile Modulus                             | 2944                         | 1841              | MPa               |
| Flexural Strength                           | 65.2                         | 23.8              | MPa               |
| Flexural Modulus                            | 3304                         | 1737              | MPa               |
| Elongation at break                         | 1.2                          | 0.8               | %                 |
| Charpy Impact (notched, 23°C)               | -                            | -                 | kJ/m <sup>2</sup> |
| Hardness                                    | 85.2                         |                   | Shore D           |
|   |                              |                   | ISO 7619 - 1      |

(1) Values obtained on printed specimens, 0.6 mm nozzle, 100% rectilinear infill, 0.2 mm layer height for more information contact us by email at [info@smartmaterials.com](mailto:info@smartmaterials.com) or visit our website [www.smartmaterials3d.com](http://www.smartmaterials3d.com)

|   |           |  |      |
|---|-----------|--|------|
| <b>PRINTING PROPERTIES <sup>(1)</sup></b> |           |  |      |
| Print Temperature                         | 200 – 230 |  | °C   |
| Hot Pad                                   | 40 – 60   |  | °C   |
| Fan Layer                                 | 100       |  | %    |
| Print Speed                               | 25 – 50   |  | mm/s |
| Flow                                      | 100       |  | %    |
| Layer Height                              | ≥ 0.2     |  | mm   |
| Recommended Nozzle Size (Brass)           | ≥ 0.6     |  | mm   |

| SIZE | NET WEIGHT | GROSS WEIGHT | 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 lacquer 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.