

PP

TECHNICAL DATA SHEET VERSION 1.0

PP

Polypropylene with special additives to improve its adhesion to the printing surface. Very versatile material, transparent, light and flexible. It also has excellent mechanical and chemical resistance making it ideal for industrial applications.



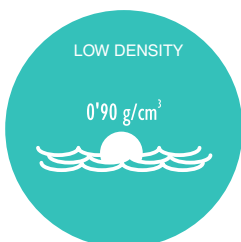
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	TYPICAL VALUE	UNITS	TEST METHOD
<b>PHYSICAL PROPERTIES</b>			
Chemical Name	Polypropylene		
Material Density	0.9	g/cm <sup>3</sup>	ISO 1183
<b>MECHANICAL PROPERTIES</b>			
Tensile Strength at Break (23°)	20	MPa	ISO 527 -1,-2
Tensile Modulus (23°)	620	MPa	ISO 178
Shore D hardness	58		ISO 868
<b>THERMAL PROPERTIES</b>			
Heat Distorsion Temperature	62	°C	ISO 75
Vicat Softening Temperature	107	°C	ISO 306
<b>PRINTING PROPERTIES</b>			
Print Temperature	210-230	°C	
Hot Pad	60-100	°C	
Fan Layer	ON (100)	%	

SIZE	NET W.	GROSS W.	DIAMETERS	COLOR	PACKAGING
M	700 g	975 g	1.75 mm/2.85 mm	Various colors	SmartBag, security seal, desiccant bag



# USE RECOMENDATIONS

## PRINTING TEMPERATURE

It is recommended to **use a printing temperature of 220°C**. Above this temperature, it will come very fluid and this will decrease the printed piece quality. On the other hand, bellow this temperature the material will become difficult to be extruded by the printer.

## HOT BED

**The heating bed should be between 65/70°C**. Do not worry about contractions because our PP filament is designed to avoid them. Higher bed temperatures will just create or

## USE SMART STICK

Use SMART STICK to fix the PP to the warm bed. See the instructions for use in the technical data sheet of the product.

## PP ADHESIVE TAPE

**You can also use the PP adhesive tape to attach to the warm bed**. This way the PP will get in contact with the base of the sealing tape and will stay fix to the base of the heating bed.

## WARNING

Use the stick side face-down. The non-stick side will be in contact with the printing pieces as it is PP against PP contact what improves the adhesion.

## USE BRIM

We also recommend to **use Brim** when printing and that **the first layer that gets in contact with the base should be thin** in order to force the adhesion between the material and 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.