

Technical Data Sheet

Chemical Name:

Polyvinyl Alcohol

Main Applications:

Concept modeling, Educational projects, Design projects, Water-soluble support structures to achieve complex geometries.

Description:

It's a plastic disolvable in water, biodegradable and non toxic. It's the only one filament you wont (most sure you wont, unless some really weird aplications) use as a stand alone filament but as support material.

Key Aspects:

It is extremely sensitive to moisture, so storage has to be done using air tight containers, this brings some troubles at printing time: if filament has aboserbed moisture, leaving the filament inside a hotend at printing temperature without extrudeing it, gives you greater choices of clogging the noozle, that's why is always recommended to cool down the extruder while not printing.

Diameter:

1.75 mm, 2.85 mm

Meters per 750 g:

114.577 / 43.200

Weight

350 g

Weight per meter:

3.05 / 8.10 g

Density:

1.27

Meters per kg:

327.363 / 123.429

Color Information:

Color:

Natural

PANTONE:

--

Printing Settings

Printing Temperature	180 - 205 °C
Density (g/cc)	1.27
Build Plate Temperature	Optional 50 - 60 °C
Cooling Fans	YES

Mechanical Properties

Value

Melt flow index (190°C, 21.6kg)	14-20
Melting temperature	170
Glass transition temperature	60
Bulk density (g/cm³)	0.6-0.9
Volatiles content (wt.%)	<1
Methanol content (wt.%)	<1



Warning:

This product can expose you to chemicals, which are known to the State of California to cause cancer. For more information, go to www.P65Warnings.ca.gov

Disclaimer:

This TDS, based on current knowledge and experience, contains a general summary of hazards and is consistent with the information provided by the supplier. No liability can be assumed for the accuracy and completeness of this information. The information in this TDS applies for this specific material only. It therefore does not apply for its usage in combination with other materials or ways of processing. It is user's responsibility to read and understand this information and incorporate it into individual safety programs, according to all legal and regulatory applicable procedures. Smart International gives no warranty whatsoever, including the warranties of merchantability or of fitness for a particular purpose. Any product purchased is sold on the assumption the user shall determine the quality and suitability of the product. Smart International expressly disclaims any and all liability for incidental, consequential or any other damages arising out of the use or misuse of this product. No information provided shall be deemed to be a recommendation to use any product in conflict with any existing patent rights.