

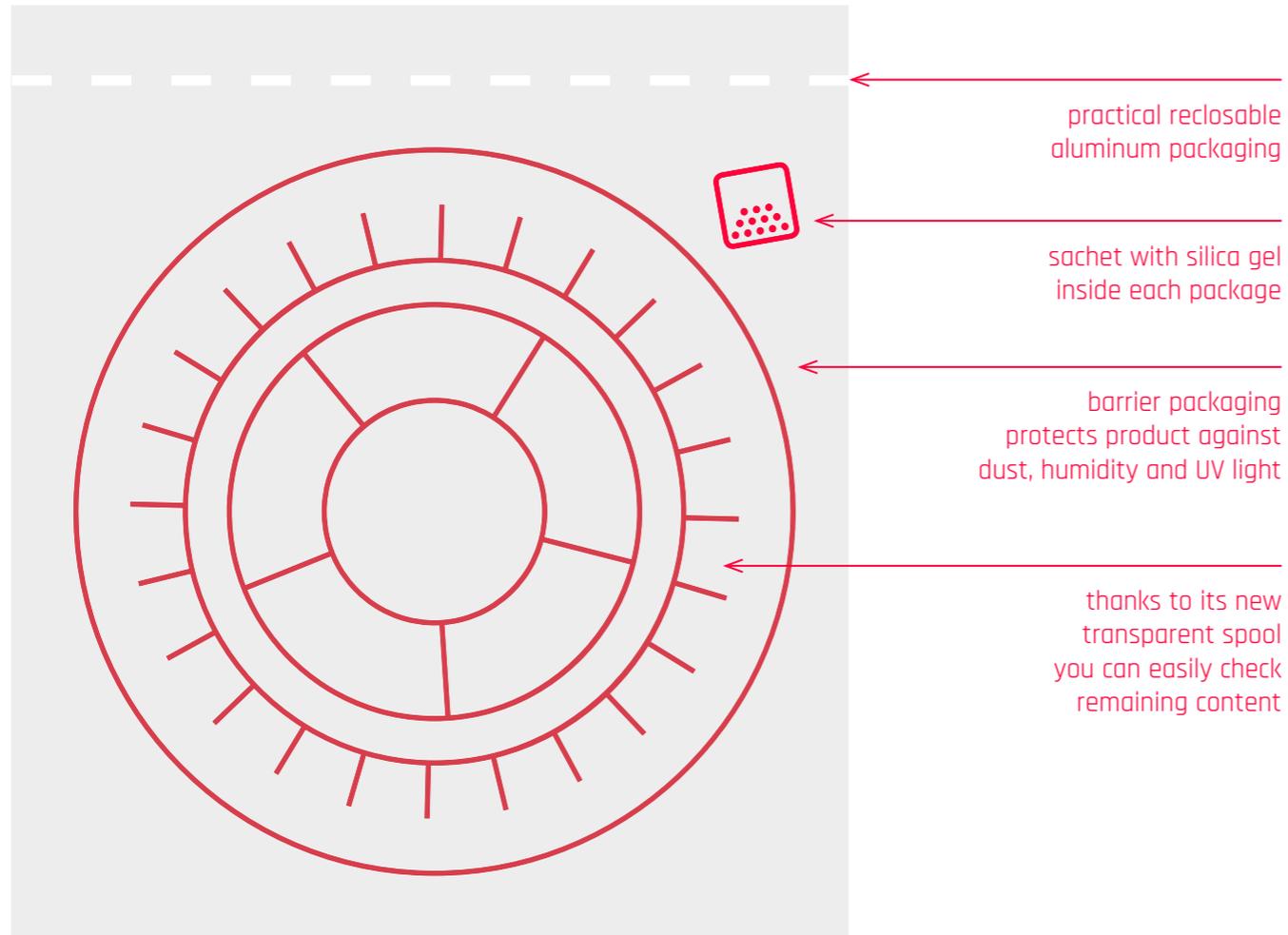
fillamentum  
addi(c)tive polymers



Autumn 2016

# Product Catalogue

# We introduce you Fillamentum packaging design



# Content

PLA Extrafill	4
PLA Crystal Clear	10
PLA Extrafill Premium	11
ABS Extrafill	12
Nylon FX256	17
Nylon CF15	18
Nylon AF80	19
ASA	20
CPE	22
Maxi Spool	23
Flexfill	24
Timberfill	28
Support Materials	32
Accessories	34
Contacts	35

# PLA Extrafill

Fillamentum PLA Extrafill is a material for the FFF (also known as FDM) 3D printing technology.

The advantage of this material is that it can be used in 3D printers easily, that it allows a high quality of printing even in tricky details and an excellent lamination of the printed object.

PLA filament is made of natural ingredients and is easily biodegradable by composting.

Fillamentum guarantees high precision of filament dimensions within the tolerance of  $\pm 0.05$  mm, which is strictly controlled throughout the production.

Printing filaments reported on the market under the trademark Fillamentum are produced in a wide variety of colours in accordance with the colour charts RAL and Pantone, and also in own unique colour ranges.

**+** Diameter tolerance:  $\pm 0.05$  mm

**🌡️** Working temperature: 190 - 210 °C

Weight: > 750 g

# PLA Extrafill



**Natural**  
RAL: N/A  
Pantone: N/A

1.75 mm 2.85 mm



**Cobalt Blue**  
RAL: 5013  
Pantone: P5255

1.75 mm 2.85 mm



**Concrete Grey**  
RAL: 7023  
Pantone: P424

1.75 mm 2.85 mm



**Green Blue**  
RAL: 5001  
Pantone: P302

1.75 mm 2.85 mm



**Green Grass**  
RAL: 6010  
Pantone: P349

1.75 mm 2.85 mm



**Chocolate Brown**  
RAL: 8017  
Pantone: P497

1.75 mm 2.85 mm



**Iron Grey**  
RAL: 7011  
Pantone: P5477

1.75 mm 2.85 mm



**Light Ivory**  
RAL: 1015  
Pantone: P726

1.75 mm 2.85 mm



**Luminous Green**  
RAL: 6038  
Pantone: P802 2x

1.75 mm 2.85 mm

# PLA Extrafill

Weight: > 750 g



**Luminous Orange**  
RAL: 2005  
Pantone: P1788 2x



**Luminous Red**  
RAL: 3024  
Pantone: P185



**Luminous Yellow**  
RAL: 1026  
Pantone: Pyellow



**Melon Yellow**  
RAL: 1028  
Pantone: P137



**Metallic Grey**  
RAL: N/A  
Pantone: N/A



**Purple Red**  
RAL: 3004  
Pantone: P91



**Signal Brown**  
RAL: 8002  
Pantone: P478



**Signal Red**  
RAL: 3001  
Pantone: P484



**Signal Yellow**  
RAL: 1003  
Pantone: P137

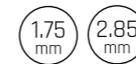


Weight: > 750 g

# PLA Extrafill



**Sky Blue**  
RAL: 5015  
Pantone: P3015



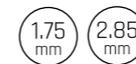
**Sulfur Yellow**  
RAL: 1016  
Pantone: P604



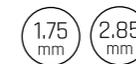
**Traffic Black**  
RAL: 9017  
Pantone: P426



**Traffic Purple**  
RAL: 4006  
Pantone: P465



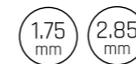
**Traffic Red**  
RAL: 3020  
Pantone: P485



**Traffic White**  
RAL: 9016  
Pantone: P705



**Traffic Yellow**  
RAL: 1023  
Pantone: P1235



**Turquoise Blue**  
RAL: 5018  
Pantone: P3145



**Turquoise Green**  
RAL: 6016  
Pantone: P342





Wonderful design of 3D printed chandelier by talented Slovak designer Silva Lovasova, awarded at the Bratislava Design Week Award 2015



## Silva Lovasova works with Crystal Clear

Silva says "Luster is an experimental lighting printed on my desktop 3d printer. While working on the first prototype I was looking for the best clear filament, as not every transparent filament has the right color. At the time I found out that czech producer Fillamentum was working on Crystal Clear. It's the best choice. And because Fillamentum is company of design enthusiasts and supporters, I can work on more colors for my printing now. Thank You!"

[www.silvalovasova.sk](http://www.silvalovasova.sk)



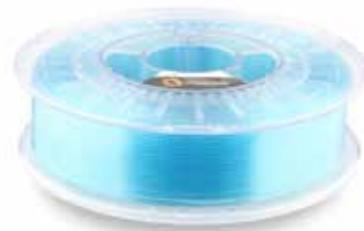
# PLA Crystal Clear \*

Weight: > 750 g



**Crystal Clear**

RAL: N/A  
Pantone: N/A



**Iceland Blue**

RAL: N/A  
Pantone: N/A



Weight: > 750 g

# PLA Extrafill Premium



**Everybody's Magenta**

RAL: N/A  
Pantone: N/A



**Gold Happens**

RAL: N/A  
Pantone: N/A



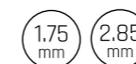
**Nobble Blue**

RAL: N/A  
Pantone: N/A



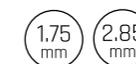
**Pearl Green**

RAL: 6035  
Pantone: P356



**Pearl Night Blue**

RAL: 5026  
Pantone: P533



**Pearl Ruby Red**

RAL: 3032  
Pantone: P208



**Pearl Violet**

RAL: 4011  
Pantone: P2655



**Rapunzel Silver**

RAL: N/A  
Pantone: N/A



\* more colors available soon

# ABS Extrafill

Fillamentum ABS Extrafill is a material for the FFF (also known as FDM) 3D printing technology.

The advantage of this material is that it can be used in 3D printers easily, that it allows a high quality of printing even in tricky details and an excellent lamination of the printed object.

ABS filament is a polymer which is ideal for the production of the first functional samples before serial production for functional prototyping, manufacturing tools, but also for the production of goods for everyday use.

Use of the ABS material in the food industry is dependent on the final product and responsibility for use on a processor ABS Extrafill. ABS is not intended for medical applications.

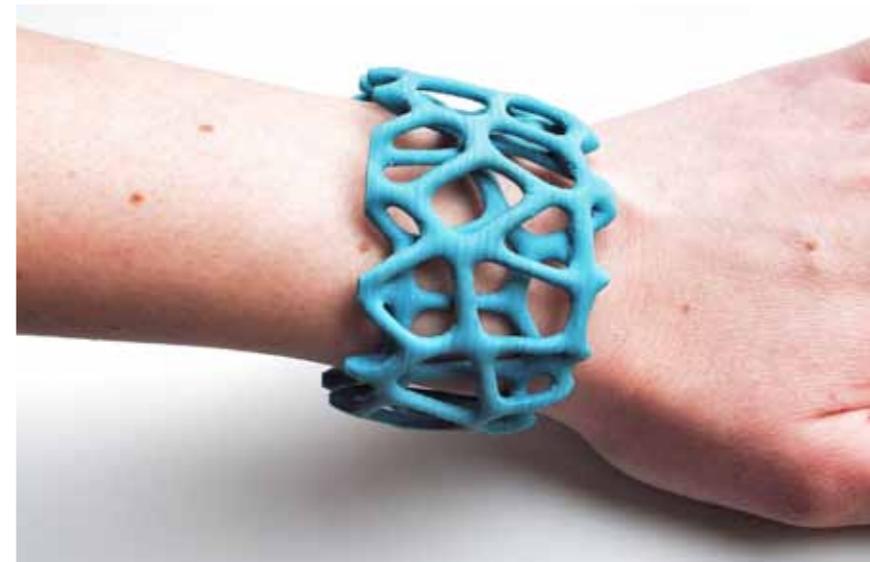
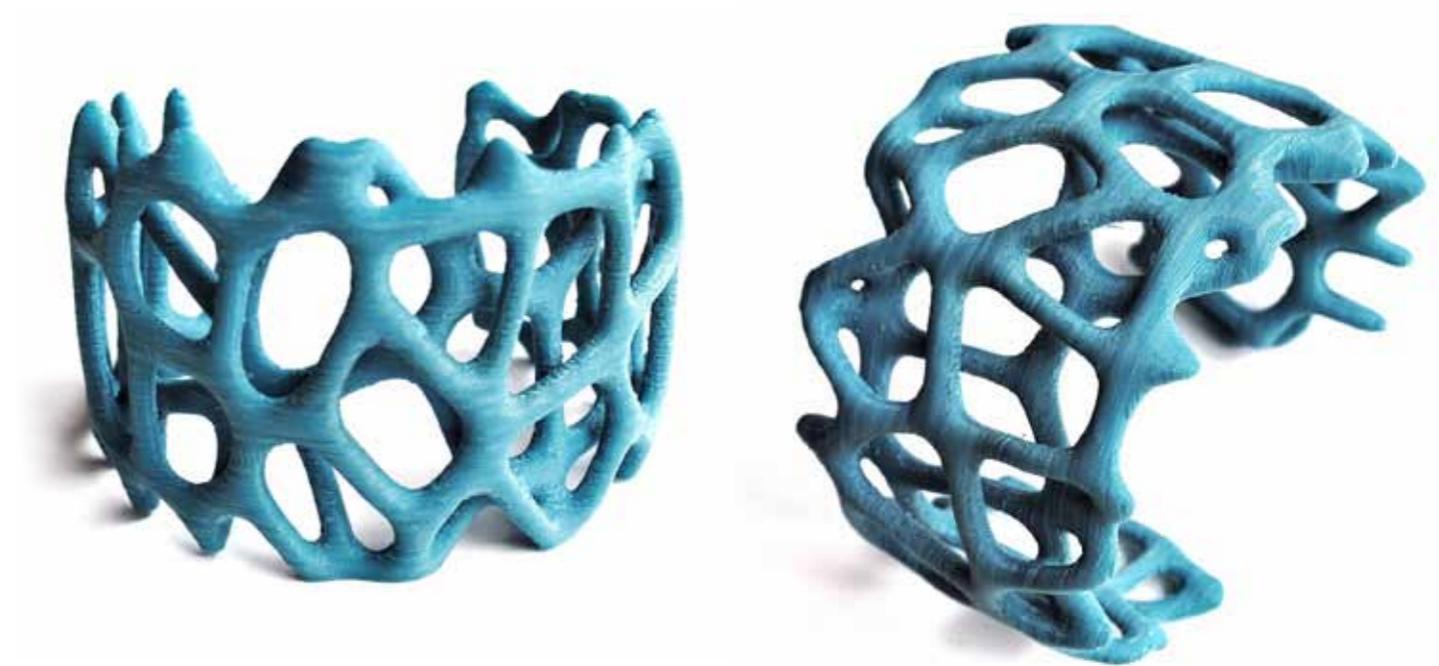
Fillamentum guarantees high precision of filament dimensions within the tolerance of  $\pm 0.05$  mm, which is strictly controlled throughout the production.

Printing filaments reported on the market under the trademark Fillamentum are produced in a wide variety of colours in accordance with the colour charts RAL and Pantone, and also in own unique colour ranges.

+ Diameter tolerance:  $\pm 0.05$  mm

🌡 Working temperature: 220 - 240 °C

🔥 Hot pad: 80 - 100 °C



Beautiful and inspirational bracelet from talented Hungarian designer Peter Szabo, printed out of Fillamentum.

(photo from parametric-art.com)

**parametric | art**  
generative | design  
3D print | architecture

# ABS Extrafill

Weight: > 750 g



## Natural

RAL: N/A  
Pantone: N/A



## Cobalt Blue

RAL: 5013  
Pantone: P5255



## Concrete Grey

RAL: 7023  
Pantone: P424



## Green Blue

RAL: 5001  
Pantone: P302



## Luminous Orange

RAL: 2005  
Pantone: P1788 2x



## Metallic Grey

RAL: N/A  
Pantone: N/A



## Signal Brown

RAL: 8002  
Pantone: P478



## Signal Red

RAL: 3001  
Pantone: P484



## Signal Yellow

RAL: 1003  
Pantone: P137



Weight: > 750 g



## Sky Blue

RAL: 5015  
Pantone: P3015



## Traffic Black

RAL: 9017  
Pantone: Pblack 2 2x



## Traffic Purple

RAL: 4006  
Pantone: P465



## Traffic Red

RAL: 3020  
Pantone: P485



## Traffic White

RAL: 9016  
Pantone: P705



## Traffic Yellow

RAL: 1023  
Pantone: P1235



## Transparent

RAL: N/A  
Pantone: N/A



## Turquoise Blue

RAL: 5018  
Pantone: P3145



## Turquoise Green

RAL: 6016  
Pantone: P342



# ABS Extrafill

# Technical Polymers for industrial applications

Thanks to the huge development of 3D printing technology, demand for technical and advanced printing materials with specific properties is increasing.

Fillamentum is watching these trends and therefore gradually expands category of Technical polymers.

Currently Fillamentum offers Nylon FX256, Nylon CF15, Nylon AF80, ASA and CPE filaments with higher technical properties.

## Nylon FX256

Fillamentum Nylon FX256 is a material for the FFF (also known as FDM) 3D printing technology.

The main advantage of this filament is that it is an incredibly strong, durable and versatile 3D printing material. Flexible when thin layer, but with very high inter-layer adhesion. Its low friction coefficient and high melting temperature makes it an excellent choice for printing functional and technical parts. Unlike ABS and PLA filaments is Nylon FX256 far less brittle and therefore stronger.



**Natural \***

Weight: > 750 g



<b>+</b>	Diameter	
<b>-</b>	tolerance:	± 0.05 mm
	Working temperature:	225 °C
	Hot pad:	50 - 80 °C

\* more colors available soon

# Nylon CF15

## with carbon fibres

Fillamentum Nylon CF15 is a Nylon based carbon fibres reinforced material for the FFF (also known as FDM) 3D printing technology.

It is characterized not only by high strength and high thermal or chemical resistance, but also better processing stability and rheological properties. Typical is also low thermal expansion. This material is suitable for printing of frequently stressed parts, for example bearings etc.

Note: Nylon CF15 has abrasive properties. It is mean that will accelerate the nozzle-wear of brass nozzles faster than unfilled filaments. The hardened steel nozzles are recommended.



<b>Natural</b>		
Weight: > 750 g		
<b>+</b>	Diameter	
<b>-</b>	tolerance:	± 0,1 mm
	Working temperature:	225 °C
	Hot pad:	50 - 80 °C

\* available soon

# Nylon AF80

## with aramid fibres

Fillamentum Nylon AF80 is a Nylon based aramid fibres reinforced material for the FFF (also known as FDM) 3D printing technology.

Its main advantages are not only high strength and high thermal or chemical resistance, but also better processing stability and rheological properties. Typical is also low thermal expansion. This material is suitable for printing of frequently stressed parts (for example bearings etc.) and thanks to aramid fibres can be used as replacement of metals.



<b>Natural</b>		
Weight: > 750 g		
<b>+</b>	Diameter	
<b>-</b>	tolerance:	± 0.1 mm
	Working temperature:	225 °C
	Hot pad:	50 - 80 °C

\* available soon

# ASA

Thanks to mechanical properties is ASA filament a polymer which is ideal for the production of the first functional samples before serial production for functional prototyping, manufacturing tools, but also for the production of goods for everyday usage including outdoor applications.

The advantage of this material is its excellent weather resistance, retention of physical features; eg. ASA has a rigidity higher than ABS and thus is suitable material for demanding applications. ASA material has low levels of yellowing, which is very important for applications where long-term emphasis is placed on appearance. Another advantage is its good dimensional stability.

Fillamentum does not take any responsibility for the usage of Extrafill ASA by the processor.

- +** Diameter tolerance: ± 0.05 mm
- 🌡️** Working temperature: 250 - 255 °C
- 🔥** Hot pad: 80 - 100 °C

Weight: > 750 g

# ASA



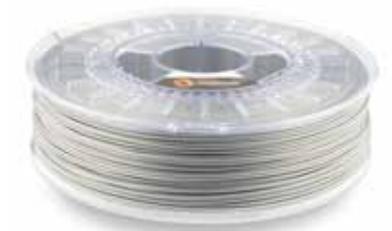
**Natural**  
RAL: N/A  
Pantone: N/A

1.75 mm 2.85 mm



**Green Grass**  
RAL: 6010  
Pantone: P349

1.75 mm 2.85 mm



**Metallic Grey**  
RAL: N/A  
Pantone: N/A

1.75 mm 2.85 mm



**Sky Blue**  
RAL: 5015  
Pantone: P3015

1.75 mm 2.85 mm



**Traffic Black**  
RAL: 9017  
Pantone: Pblack 2 2x

1.75 mm 2.85 mm



**Traffic Red**  
RAL: 3020  
Pantone: P485

1.75 mm 2.85 mm



**Traffic White**  
RAL: 9016  
Pantone: P705

1.75 mm 2.85 mm



**Traffic Yellow**  
RAL: 1023  
Pantone: P1235

1.75 mm 2.85 mm

# CPE

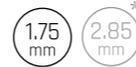
Fillamentum CPE (co-polyester) is a high-technical material for the FFF (also known as FDM) 3D printing technology.

It excels in ease of processing and is good for application with low crystallisation rate, it is durable and human-friendly material, which can be recycled. Another advantages are: less shrinkage than ABS, lower water absorption than Nylon, high impact, heat and chemical resistance or dimensional stability. Thanks to its optical properties it can be coloured without losing transparency (it will be developed later).

<b>+</b>	Diameter	
<b>-</b>	tolerance:	± 0.05 mm
	Working temperature:	215 - 225 °C
	Hot pad:	80 - 100 °C



**CPE HG100 natural**  
Weight: > 750 g



**CPE HM100 natural**  
Weight: > 750 g



# Maxi Spool

**Economical  
2.5 kg spool  
available for  
ABS, PLA  
and ASA\***



Weight: > 2500 g



 <b>Natural</b> RAL: N/A, Pantone: N/A	 <b>Sky Blue</b> RAL: 5015, Pantone: P3015	 <b>Traffic White</b> RAL: 9016, Pantone: P705
 <b>Green Grass</b> RAL: 6010, Pantone: P349	 <b>Traffic Black</b> RAL: 9017, Pantone: Pblack 2 2x	 <b>Traffic Yellow</b> RAL: 1023, Pantone: P1235
 <b>Metallic Grey</b> RAL: N/A, Pantone: N/A	 <b>Traffic Red</b> RAL: 3020, Pantone: P485	

\* available soon

\* more materials reeled on Maxi Spool on request

# Flexfill

Would you like your 3D models to stand out by their elasticity and flexibility but you could not find a suitable elastic material that would fulfill your idea?

We have a solution - try printing flexible parts with Flexfill 3D printing filament in two hardness shores (92A, 98A) by Fillamentum. And if you have a printer with two print heads you can use Flexfill to add an extra layer which will make a surface soft to touch.

Flexfill series filament is the leading flexible filament in the industry. Its unique features of flexibility and elasticity provides reliable and high quality prints.

**+** Diameter tolerance: ± 0.1 mm

**🌡️** Working temperature: 200 - 220 °C

**🔥** Hot pad: 30 - 50 °C



Weight: > 500 g

## Flexfill 92A



**Natural**  
RAL: N/A  
Pantone: N/A

1.75 mm 2.85 mm\*



**Luminous Green**  
RAL: 6038  
Pantone: P802 2x

1.75 mm 2.85 mm\*



**Metallic Grey**  
RAL: N/A  
Pantone: N/A

1.75 mm 2.85 mm\*



**Signal Red**  
RAL: 3001  
Pantone: P484

1.75 mm 2.85 mm\*



**Signal Yellow**  
RAL: 1003  
Pantone: P137

1.75 mm 2.85 mm\*



**Sky Blue**  
RAL: 5015  
Pantone: P3015

1.75 mm 2.85 mm\*



**Traffic Black**  
RAL: 9017  
Pantone: P426

1.75 mm 2.85 mm\*

\* available soon

# Flexfill 98A

Weight: > 500 g



## Natural

RAL: N/A  
Pantone: N/A



## Luminous Green

RAL: 6038  
Pantone: P802 2x



## Metallic Grey

RAL: N/A  
Pantone: N/A



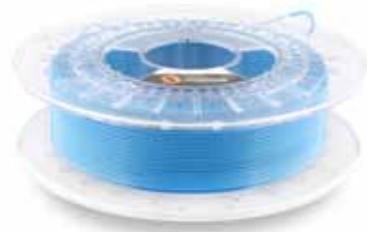
## Signal Red

RAL: 3001  
Pantone: P484



## Signal Yellow

RAL: 1003  
Pantone: P137



## Sky Blue

RAL: 5015  
Pantone: P3015



## Traffic Black

RAL: 9017  
Pantone: P426



design made by Oldřich Vojta  
construction by Martin Hřeben  
print by Petr Bláha  
photo by Ivan Pinkava  
printed out of Flexfill

# Timberfill

Fillamentum Timberfill is a material for the FFF (also known as FDM) 3D printing technology.

The advantage of this material is that it can be used in 3D printers easily, that it allows a high quality of printing even in tricky details and an excellent lamination of the printed object.

Timberfill filament is made of biodegradable material based on wood. The material exhibits similar mechanical features as ABS or PLA and models printed with this material have a genuine appearance of wood.

For achieve the best prints quality is recommended min. 0,5 mm nozzle.

Fillamentum guarantees high precision of filament dimensions within the tolerance  $\pm 0.1$  mm, which is strictly controlled throughout the production.

**+** Diameter tolerance:  $\pm 0.1$  mm

**🌡️** Working temperature: 170 - 185 °C

**🔧** The minimum diameter of the nozzle: 0.4 mm

Weight: > 750 g

# Timberfill



**Cinnamon**  
RAL: N/A  
Pantone: N/A

1.75 mm 2.85 mm



**Champagne**  
RAL: N/A  
Pantone: N/A

1.75 mm 2.85 mm



**Light Wood Tone**  
RAL: N/A  
Pantone: N/A

1.75 mm 2.85 mm



**Rosewood**  
RAL: N/A  
Pantone: N/A

1.75 mm 2.85 mm

## Akemake - pioneers of Timberfill printed designs

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The speaker, called the Spirulida, was designed by Ondra Chotovinsky (Akemake), and is based on a deep sea squid-like species - the Spirulida.

„Spirulida is the World's First Desktop Speaker you can easily print and assemble by yourself. Its form and full range speaker system are a marriage of quality

sound and modern aesthetics - producing a timeless piece that allows you to stream 3D printing ideology with us.“ says designer from Akemake.



Spirulida - designed by Akemake, printed out of Timberfill

# Support materials

## PVA

The advantage of this material is that it can be used in 3D printers easily, that it allows a high quality of printing even in tricky details and an excellent lamination of the printed object.

PVA filament is made of a polymer that is ideal for printing support structures models of 3D printers when aid is then dissolved in water.

We guarantee high precision of filament dimensions within the tolerance  $\pm 0.1$  mm, which is strictly controlled throughout the production.

Material dissolves in water.

## HIPS

HIPS is one of the new materials, which began to be used for 3D printing. It is one of the most commonly used polymeric materials in the world. Due to its physical properties - strength and heat resistance - is widely used in the packaging industry, food industry etc.

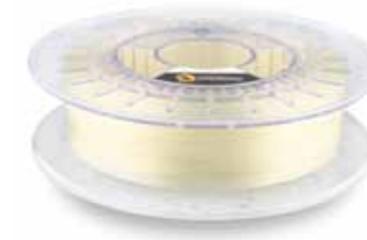
HIPS filament is made of a polymer which has very similar properties to ABS with regards to rigidity and impact resistance. HIPS is useful for printing support parts that will dissolve in Lemonesol and for that reason is HIPS very interesting, in combination with ABS, for the creation of models.

Material dissolves in Lemonesol.

## Lemonesol

Lemonesol is a special liquid, which dissolves HIPS filament without any effect on the quality of the ABS print. Lemonesol is a biodegradable material, which is made of oil from the peel of citrus fruits. Lemonesol is not intended for internal and needs to be worked with in a well-ventilated room.

# PVA, HIPS, Lemonesol



**PVA Extrafill Natural**

Weight: > 500 g

1.75 mm

**+** Diameter  
**-** tolerance:  $\pm 0.1$  mm

**🌡️** Working temperature: 205 - 220 °C



**HIPS Extrafill Natural**

Weight: > 750 g

1.75 mm

2.85 mm

**+** Diameter  
**-** tolerance:  $\pm 0.05$  mm

**🌡️** Working temperature: 245 - 250 °C

**🔥** Hot pad: 90 - 100 °C



**Lemonesol**

315 ml

625 ml

How to use Lemonesol:

Simply submerge your model in the liquid for 2 or more hours. Your HIPS filament will become slimy and will eventually dissolve; your ABS model will remain unharmed.

# Accessories

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## Magigoo 3D printing adhesive

MAGIGOO is an easy to use 3D printing adhesive designed to address 'the first layer not sticking problem', the most common problem found in FDM 3D printing technology. This problem occurs when the print detaches itself from the printing platform ruining itself. Perfecting the first layer is vital to get a great foundation for the rest of the print. MAGIGOO has been specifically designed for use with both PLA and ABS filaments.

MAGIGOO is easily cleaned with water - the most universal and easily attainable of solvents! After each print the build plate should be cleaned using a damp cloth. This will remove excess build-up of MAGIGOO.

MAGIGOO's adhesive properties are designed to release the 3D print once the build plate has cooled down. You will hear a distinctive 'crackling' sound for both ABS and PLA during the cooling process. Once cooled, 3D prints can easily be removed without the use of tools and excessive force.

MAGIGOO helps combat 3D print warping - a recurring problem in 3D printing. It is extremely rewarding to have a 30 hour print complete without any warping and having it release easily once cooled.



# Contact us

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