

# FORM<sup>®</sup> FUTURA

3D PRINTING MATERIALS

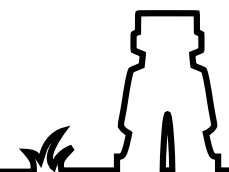


CATALOGUE - 2020



## Established in 2012

- The first real 3D printing filament brand
  - Founded in Amsterdam
  - Made in the Netherlands
  - Worldwide distribution



## Ideal partner for industry

- Wide variety of high-end engineering materials
- Fully customizable solutions
  - Customizable materials & colors
  - Customizable spool sizes



## Progressive support solutions

- Proactive sharing of knowledge
- Comprehensive online support environment
  - E-learning
  - Extensive FAQ
- Open download portal for data, footage, content, and more

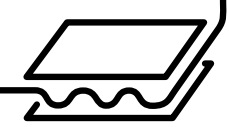
## Sustainability

- Front-runner in sustainable packaging
  - Fully recyclable packaging
  - Cardboard spools & climate neutral boxes
  - FSC certified
- Focus on green initiatives



## Product leadership & innovation

- Continuous focus on adapting new industry-leading materials to the field of 3D printing



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# TitanX



TitanX is a high-end engineering filament with ABS (acrylonitrile butadiene styrene) as the main component. The formulation of TitanX is enhanced with added polymers, binding agents and impact modifiers resulting in an engineering filament that combines exceptional mechanical properties with optimized interlayer adhesion and virtually no warping.

TitanX is used by industries worldwide for creating functional prototypes and end-use parts.

## Key Features

- Good surface quality
- Strongly improved mechanical properties
  - >65% more impact resistant than regular ABS
- Minimal warping, excellent interlayer adhesion, and seamless build plate adhesion
- Precise 3D printing with remarkable fine detail
- Vicat softening temperature of 97°C
- Compatible with Helios Support for complex multi-extrusion 3D printing
- Nearly odorless processing and no unpleasant styrene smell when being 3D printed

## Applications

- Functional prototyping
- End-use parts
- Fit testing
- Engineering parts
- Short-run manufacturing

## Available colors



## Standard weights

- 50gr
- 750gr
- 2300gr
- 4500gr



More information

# ApolloX



ApolloX is a high-end engineering filament with ASA (acrylonitrile styrene acrylate) as the main component. The formulation of ApolloX is enhanced with added polymers, binding agents and impact modifiers resulting in an engineering filament that combines exceptional mechanical properties with optimized interlayer adhesion and limited warping.

ApolloX is used by industries worldwide for creating UV and weather resistant functional parts with nearly injection molded precision.

## Key Features

- High impact resistance
- UV and weather resistant
  - Excellent resistance to changing weather conditions and UV light
- Good mechanical properties
- Minimal warping, excellent interlayer adhesion, and seamless build plate adhesion
- Detailed 3D printing with nearly injection moulded precision
- Vicat softening temperature of 98°C
- Compatible with Helios Support for complex multi-extrusion 3D printing
- Nearly odorless processing and no unpleasant styrene smell when being 3D printed

## Applications

- Functional (outdoor) prototyping
- End-use parts for outdoor applications
- Automotive parts
- Engineering parts
- Short-run manufacturing

## Available colors



## Standard weights

- 50gr
- 750gr
- 2300gr
- 4500gr



More information

# Centaur PP



Centaur PP (Polypropylene) is a versatile engineering plastic that combines excellent mechanical properties with good chemical- and electrical resistance. Centaur PP is dishwasher proof, microwave safe and meets various EU and US food contact specifications.

## Key Features

- Food contact compliant
- Dishwasher proof and microwave safe
- High wear-, abrasion- and fatigue resistance
- Seamless interlayer adhesion
- Good chemical resistance
- High electrical resistance
- Semi-flexible
  - Can stretched up to >600% before breaking
  - Shore hardness of D50
- Low density of 0.9 g/cc resulting in lightweight prints

## Applications

- Snap-fit assemblies
- Functional prototypes
- Durable housings
- Living hinges
- Packaging
- Form and fit testing
- Electrical insulator
- Short-run manufacturing

### Available colors



### Standard weights

- 50gr
- 500gr
- 1500gr
- 3500gr



More information

# Pegasus PP Ultralight



Pegasus PP (Polypropylene) is an ultralightweight engineering filament that is nanotechnology enhanced with hollow glass microspheres. With a material density of 0.75 g/cc Pegasus PP is most likely the lightest 3D printing material available.

## Key Features

- Extremely lightweight
  - $\geq 20\%$  lighter than average PP
  - $\geq 40\%$  lighter than average PLA
- Very high strength to weight ratio
- Good wear-, abrasion- and fatigue resistance
- Seamless interlayer adhesion
- Good chemical resistance

## Applications

- Automotive parts
- Functional prototypes
- Floating applications
- End-use parts
- Short-run manufacturing

### Available colors



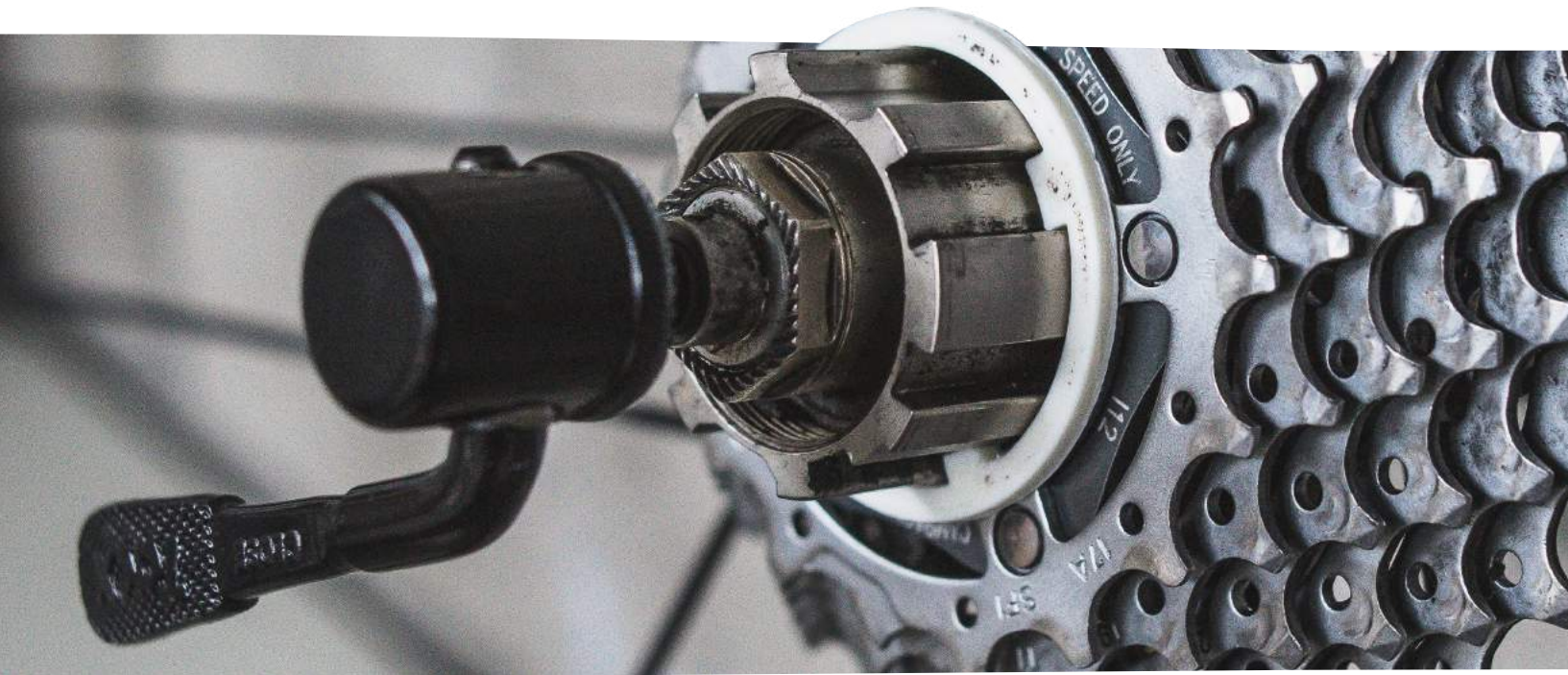
### Standard weights

- 50gr
- 500gr



More information

# STYX-12 NYLON



STYX-12 is a PA12 (polyamide) industrial-grade engineering plastic that offers an impressive combination of mechanical-, chemical-, and hygroscopic properties. STYX-12 exhibits a very low humidity absorption compared to other nylons and can be 3D printed at relatively low temperatures. This ensures a seamless 3D printing process.

Next to that, STYX-12 yields excellent UV and weather resistant properties and complies with EU food contact norms.

## Applications

- Mechanical parts
- Functional prototypes
- Tooling
- Industrial prototyping
- End-use parts
- Short-run manufacturing

## Key Features

- Superb mechanical properties
  - Strong, durable, flexible, high impact resistance, high crack resistance, high scratch resistance
- Excellent chemical resistance
- UV and weather resistant
- Reduced humidity absorption
- Food contact compliant

### Available colors



### Standard weights



More information

# Volcano PLA



Volcano PLA (polylactic acid) is an industrial-grade PLA which is engineered for professional applications that require high printing speeds and improved heat resistance and mechanical properties similar to ABS. Volcano PLA offers the same mechanical and thermal properties - after annealing - as most ABS filaments, but with the biodegradability and ease of printing of PLA. Volcano PLA combines a high heat resistance with high printing speeds and high impact resistance into a PLA-based filament engineered for industrial applications.

## Applications

- Tooling
- Functional prototyping
- Mechanical components
- End-use products
- Manufacturing aids
- Short-run manufacturing

## Key Features

- High heat resistance of  $\geq 95^\circ \text{C}$  after annealing
- Less than 0.3% shrinkage after annealing
  - Roughly 8 times less shrinkage compared to competitor materials available on the market
  - Engineered to have excellent dimensional accuracy before and after annealing
- Engineered for high printing speeds of  $> 120\text{mm/s}$
- Highly crystalline immediately after extruding resulting in increased stiffness and temperature resistance
- Superb mechanical properties comparable to ABS
- Excellent interlayer adhesion and matte surface finish
- Compatible with HeliosSupport for complex multi-extrusion 3D printing
- Biodegradable

### Available colors



### Standard weights



More information

# CarbonFil



CarbonFil is a composite PETG (polyethylene terephthalate glycol) filament which is gravimetrically reinforced with 20% carbon fibers. CarbonFil shows great dimensional stability and yields a combination of stiffness, heat resistance and impact strength.

## Applications

- RC parts and drones
- Automotive parts
- End-use parts
- Short-run manufacturing

## Key Features

- High impact resistance
- UV and weather resistant
  - Excellent resistance to changing weather conditions and UV light
- Good mechanical properties
- Minimal warping, excellent interlayer adhesion, and seamless build plate adhesion
- Detailed 3D printing with nearly injection moulded precision
- Vicat softening temperature of 98°C
- Compatible with Helios Support for complex multi-extrusion 3D printing
- Nearly odorless processing and no unpleasant styrene smell when being 3D printed

## Available colors



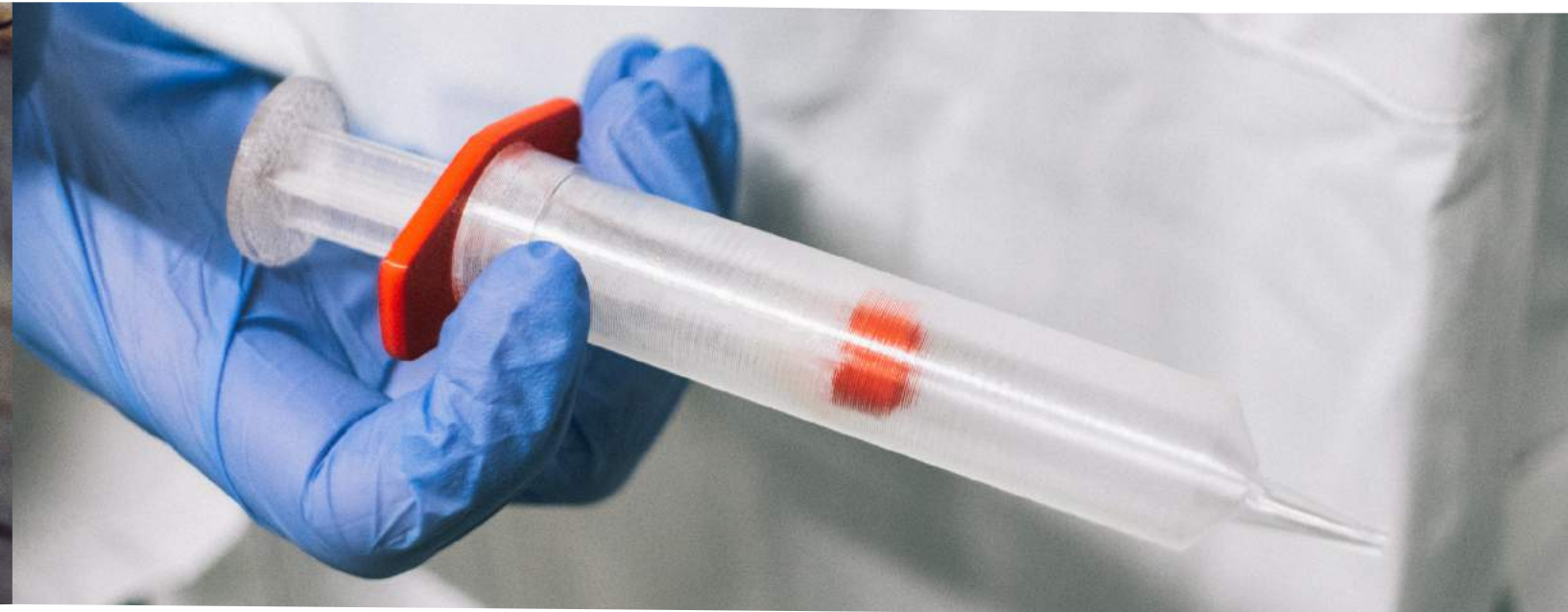
## Standard weights

- 50gr
- 500gr
- 2300gr



More information

# Crystal Flex



Crystal Flex (styrene-butadiene copolymer) yields formability, toughness, and clarity into is a high-performance semi-flexible 3D printer filament. Crystal Flex meets the specifications of the United States FDA Food Packaging Regulation 21 CFR 177.1640 and complies with UL 94 HB flammability standards.

## Applications

- Fit testing
- Lighting
- Bottles, boxes, containers and (blister) packaging
- End-use parts
- Medical and lab equipment

## Key Features

- Excellent clarity
  - Very clear filament with 92% light transmittance and high surface gloss
- Semi-flexible, bendable and resilient
  - Shore hardness of 63D and bendable up to 230% without causing white stress marks
- Food contact acceptable
- UL 94 HB flammability rating
- Compatible with Helios Support for complex multi-extrusion 3D printing

## Available colors



## Standard weights

- 50gr
- 500gr



More information

# FlexiFil



FlexiFil is a high-performance TPC (thermoplastic co-polyester) made partially from renewable rapeseed oil in place of mineral oil that significantly reduces carbon dioxide emissions from cradle to gate.

FlexiFil exhibits unique “flexural memory” properties and retains shape after torsion, bending, and/or flexing. FlexiFil combines flexibility with long term heat resistance, strength, excellent UV resistance and good resistance to chemicals.

## Applications

- Electronic parts
- Automotive
- Functional prototyping
- End-use parts
- Specialty packaging

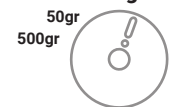
## Key Features

- Very flexible filament with “flexural memory”
  - Shore hardness of 45D
- High impact resistance
  - No deformation or breaks when stressed by bending
- Strong & durable with high toughness and fatigue resistance
- Good resistance to chemicals
- Excellent UV resistance
- IEC 60695-11-10 Flammability classification: HB
- 43% renewable bio-based content

## Available colors



## Standard weights



More information

# Python Flex



Python Flex is a high-performance flexible TPU (Thermoplastic Polyurethane) filament, which is designed for high speed printing on both direct drive and Bowden style extruders.

Python Flex has a shore hardness of 98A and exhibits excellent elastic properties as it can be stretched up to 450% before breaking. Python Flex is extremely transparent in its natural form and has excellent resistance to oil, greases, microorganisms and abrasion.

## Applications

- Snap-fit assemblies
- Functional prototyping
- Short-run manufacturing
- Specialty packaging
- Tool handles
- Seals and gaskets

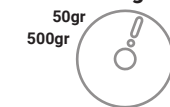
## Key Features

- Good flexibility and elasticity
  - Shore hardness of 98A
  - Up to 450% elongation at break
- Engineered for high speed printing on all extruder types
  - Flexible filament that can be printed at elevated speeds of >80mm/s
- High wear-, abrasion- and fatigue resistance
- Heat resistant up to 138°C
- Minimal warping, excellent interlayer adhesion, and seamless build plate adhesion
- Compatible with Helios Support for complex multi-extrusion 3D printing

## Available colors



## Standard weights



More information

# Our PVA Ecosystem



With our PVA (Polyvinyl Alcohol) ecosystem we offer a comprehensive support solution for complex multi-extrusion 3D printing.

Using your 3D printer to manufacture advanced objects with overhangs or holes? With our PVA-based (polyvinyl alcohol) filaments, you'll never have to worry about the quality of the support for your 3D prints. Because PVA is completely water dissolvable, post-processing is a breeze. Take your pick from our biodegradable support filaments and let the results speak for themselves.



\* See page 42 for the full compatibility list.

## AquaSolve PVA

Excellent bonding to PLA-based materials and other (thermo)plastics that print within a similar temperature range.

- Max thermal stability of 210° C, tested up to 256 seconds with no flow

Available colors



## Atlas Support

Excellent bonding to PETG-based materials and other (thermo)plastics that print within a similar temperature range.

- Max thermal stability of 225° C, tested up to 256 seconds with no flow
- Less sensitive to deterioration by humidity compared to regular PVA

Available colors



## Helios Support

Excellent bonding to Styrene-based materials and other (thermo)plastics that print within a similar temperature range.

- Max thermal stability of 250° C, tested up to 256 seconds with no flow
- Can be printed in heated build chambers up to 60° C

Available colors



\* All our PVA Materials are biodegradable in (tap)water and can safely be disposed in a household drain/sink.

Standard weights

50gr  
300gr





# ABSpro



ABSpro is a hybrid PC/ABS (polycarbonate / acrylonitrile butadiene styrene) engineering plastic that offers a synergic effect of the superior strength and heat resistance of PC and the flexibility of ABS. ABSpro exhibits a high level of surface gloss and a seamless interlayer adhesion resulting in an engineering plastic that can be 3D printed with great dimensional stability and nearly injection molded precision.

## Applications

- Functional mechanical parts
- Tooling
- Electronic appliance parts
- Houseware
- Short-run manufacturing
- Casings

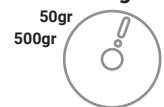
## Key Features

- High impact resistance
- Good chemical resistance
- Wear resistant and fatigue resistant
- High resolution 3D printing with fine detail
- Heat deflection temperature of 108° C
- Compatible with Helios for complex multi-extrusion 3D printing
- Excellent dimensional stability

### Available colors

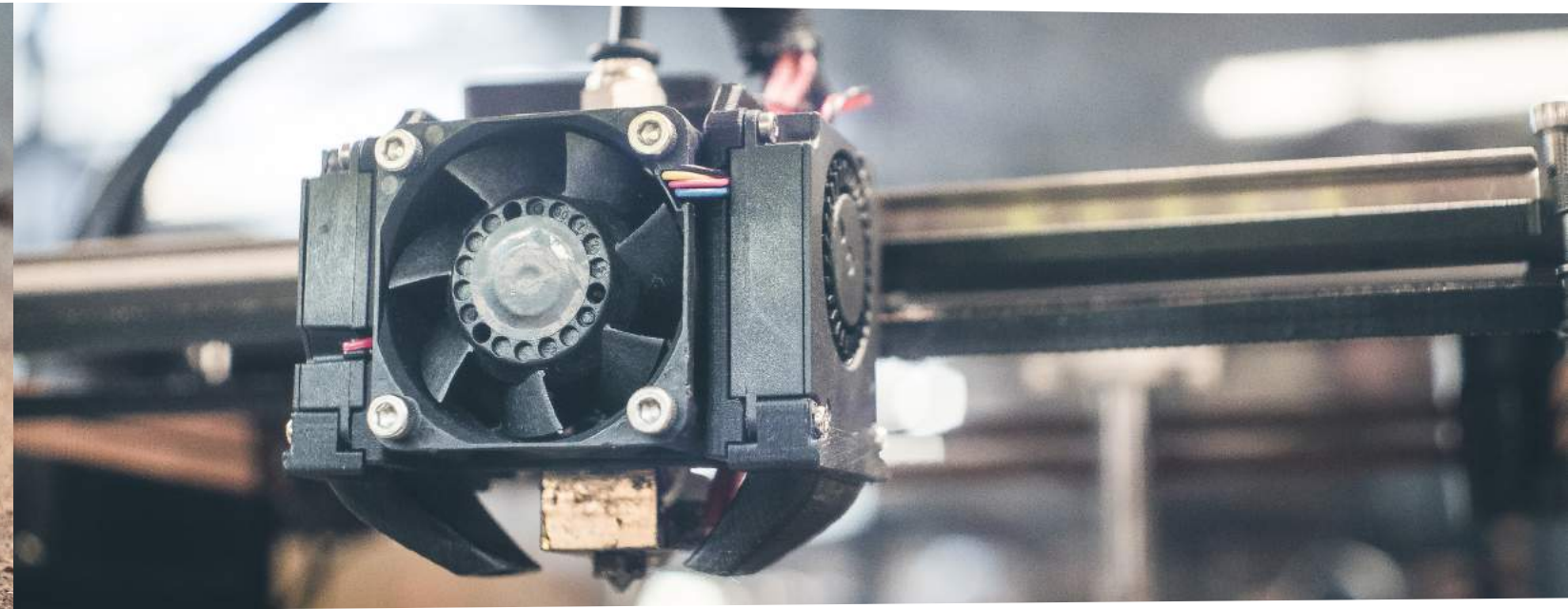


### Standard weights



More information

# ABSpro Flame Retardant



ABSpro Flame Retardant is a hybrid PC/ABS (polycarbonate/acrylonitrile butadiene styrene) engineering plastic that complies with UL 94 V-0 flammability standards. ABSpro Flame Retardant is modified with halogen-free flame retardant modifiers and is self-extinguishing within 10 seconds.



## Applications

- Functional mechanical parts
- End-use parts that need to be self-extinguishing
- Electronic appliance parts
- Short-run manufacturing

## Key Features

- Complies with UL 94 V-0 flammability standards
  - Self-extinguishing within 10 seconds
- Excellent dimensional stability
- Seamless interlayer adhesion
- High resolution 3D printing with fine detail
- Heat deflection temperature of 110° C
- Compatible with Helios Support for complex multi-extrusion 3D printing

### Available colors



### Standard weights



More information

# EasyFil ABS



EasyFil ABS (acrylonitrile butadiene styrene) combines good mechanical properties such as high impact resistance, strength, rigidity, toughness, durability, and heat resistance into a commodity ABS filament that is very versatile and that can be used for countless applications.

## Key Features

- Reliable 3D printing
- Improved mechanical strength and rigidity
- High toughness and impact strength
  - High impact strength at sub-zero temperatures
- Vicat softening temperature of 103° C
- Compatible with Helios for complex multi-extrusion 3D printing
- Post-processing with acetone
- Wide range of standard color options available
- Good to recycle

## Applications

- Tooling
- Appliance housings
- Functional prototyping
- End-use parts
- Short-run manufacturing

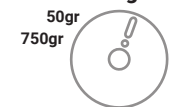
## Difference between EasyFil ABS and Premium ABS

Both EasyFil ABS and Premium ABS are far above average impact resistant ABS-type of 3D printer filaments. EasyFil ABS is however more impact modified resulting in improved mechanical properties and better processing properties. EasyFil ABS exhibits improved mechanical strength, toughness, rigidity, heat resistance and impact resistance compared to Premium ABS.

### Available colors

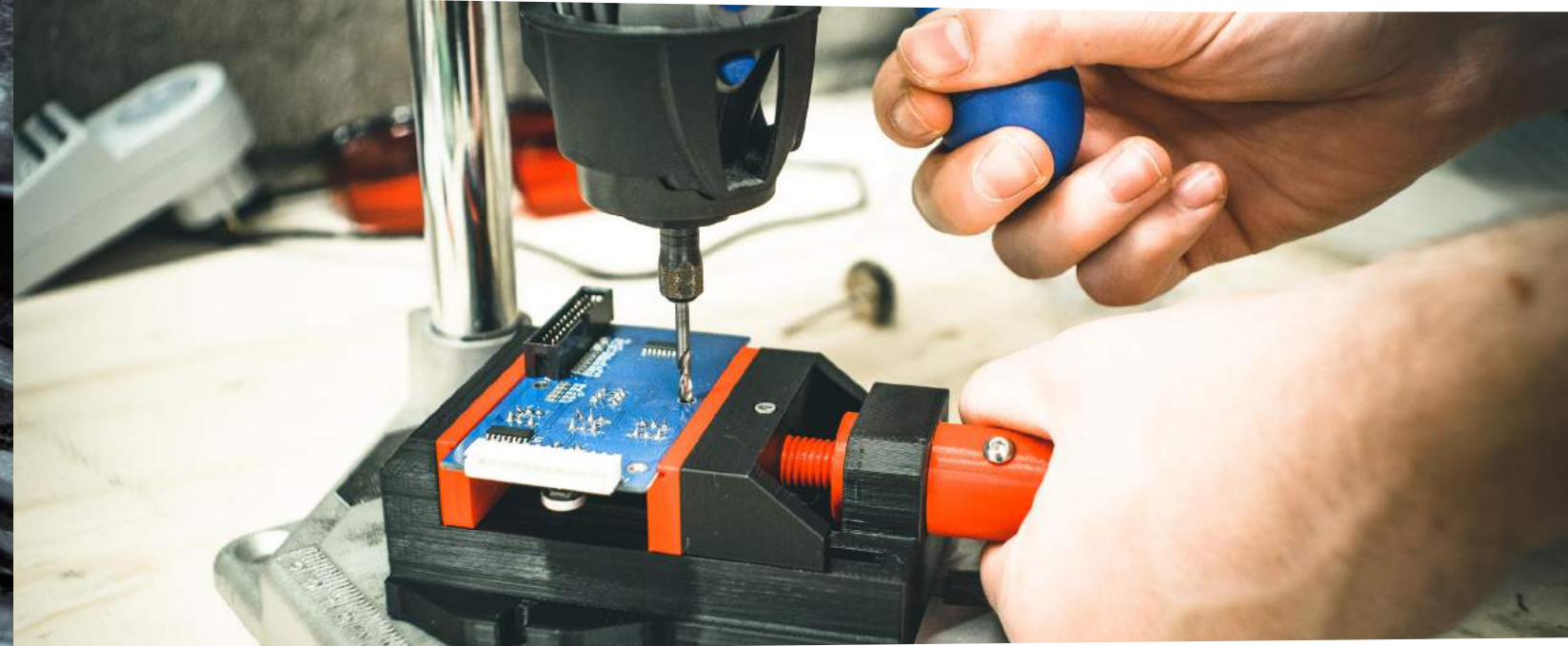


### Standard weights



More information

# Premium ABS



Premium ABS (acrylonitrile butadiene styrene) is our entry-level ABS filament which exhibits good processing stability and good mechanical properties. Premium ABS is a versatile 3D printer filament that is suitable for many applications that require durable ABS parts. Premium ABS can be post-processed with acetone.

## Key Features

- Reliable 3D printing
- Good mechanical properties
- Compatible with Helios for complex multi-extrusion 3D printing
- Post-processing with acetone
- Good to recycle

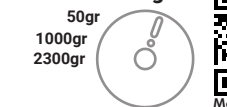
## Applications

- Tooling
- Appliance housings
- Functional prototyping
- End-use parts
- Short-run manufacturing

### Available colors



### Standard weights



More information

# ClearScent ABS



ClearScent ABS (methylmethacrylate acrylonitrile butadiene styrene) combines good mechanical properties and translucency into a 3D printer filament that is easy to process with limited warping and limited styrene smell. ClearScent ABS exhibits resistance to various chemicals and complies with UL 94 HB flammability standards.

## Key Features

- Translucent ABS filament
  - 90% light transmittance with 2.2% haze
- UL 94 HB flammability rating
- Good chemical resistance
- Limited warping and styrene smell when being 3D printed
- Compatible with Helios Support for complex multi-extrusion 3D printing
- Post-processing with acetone, tetrahydrofuran (THF) and other analogous solvents

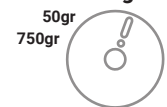
## Applications

- Household tools
- Electronic goods
- Frames and panels
- Custom components
- Short-run manufacturing

### Available colors



### Standard weights



# EasyFil HIPS



EasyFil HIPS (high impact polystyrene) is a versatile thermoplastic that is lightweight, durable, impact resistant and very suitable for 3D printing large and complex prints with a matte surface finish and virtually no visible layers. EasyFil HIPS is lightweight, easy to glue and complies with UL 94 HB flammability standards. This makes EasyFil HIPS a very suitable material for 3D printing large-scale prototypes.

## Key Features

- Lightweight and durable
- High impact resistance
- Matte surface finish with no visible layers
- High ESCR resistance
- Complies with UL 94HB flame retardancy standards
- Compatible with Helios Support for complex multi-extrusion 3D printing
- Dissolvable in d-limonene
- Can be glued with adhesives, such as styrene glues, epoxy adhesives, superglues, and contact adhesives
- Recyclable

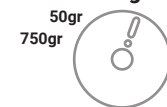
## Applications

- Casings
- Mechanical parts
- Functional testing
- Model building
- End-use parts
- Short-run manufacturing

### Available colors



### Standard weights



# Matt PLA



Matt PLA (polylactic acid) is modified to have a rough and matt surface finish. Matt PLA has excellent 3D printing properties and combines a distinguished surface quality with fine details reinforced by its matt appearance.

## Applications

- Household tools
- Architectural mock-ups
- Complex educational projects and models
- Concept models
- Manufacturing and visualization aids

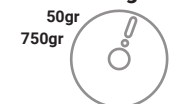
## Key Features

- Good surface quality
  - Rough and matt surface finish with fine detail
- Easy to print at high printing speeds
  - Warp-free printing and improved flowing behaviour
  - Excellent first layer adhesion to several (un)heated print surfaces
- Compatible with AquaSolve PVA
- Wide variety of matt PLA colours

### Available colors



### Standard weights



More information

# Silk Gloss PLA



Silk Gloss PLA (polylactic acid) is modified with another polymer to have a very smooth and silky surface finish with a high level of light dispersion and reflection. Silk Gloss PLA exhibits excellent 3D printing properties and allows objects to be 3D printed with a high level of glossiness and almost no visible layers.

## Applications

- Aesthetics, design, and art
- Complex educational projects and models
- Household articles
- Visualization Techniques

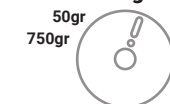
## Key Features

- Good surface quality
  - Shiny silk gloss surface finish without visible layers and fine detail
  - High level of light dispersion and reflection
  - Lowering printing speed and temperature increases the silk gloss effect
- Easy to 3D print
  - Warp-free printing and improved flowing behaviour
  - Excellent first layer adhesion to several (un)heated print surfaces
- Compatible with AquaSolve PVA for complex dual extrusion 3D printing
- Wide variety of vivid and brilliant silk gloss colours

### Available colors



### Standard weights



More information

# EasyFil PLA



EasyFil PLA (polylactic acid) is impact modified to be slightly softer than regular PLA and to optimize flow and interlayer adhesion. With this modification it has a deep opaque color and combines easy processing properties with high resolution printing and an excellent surface quality.

## Key Features

- Very easy to 3D print with improved flowing behaviour, excellent interlayer adhesion, and seamless build plate adhesion
- High resolution 3D printing with fine detail
  - Optimized flowing behaviour results in layers flowing into each other
- Good surface quality and aesthetics
- Slightly softer and tougher than regular PLA
- Compatible with AquaSolve for complex multi-extrusion 3D printing
- Wide range of standard color options available
- Biodegradable

## Applications

- Household tools
- Architectural mock-ups
- Visualization aids
- Casts and moulds
- Educational models
- Prototyping

## Difference between EasyFil PLA and Premium PLA

Both PLA ranges are based on the same grade of PLA, but EasyFil PLA is 5 times more impact modified than Premium PLA. This results in an improved flowing behavior and resolution prints with perfect surface quality. EasyFil PLA is best used with lesser complex geometries with limited to no overhangs. Premium PLA is lesser impact modified and by that has a faster crystallization process of the printed layers. Because of this faster crystallization process Premium PLA is more suitable for complex geometries and is often used for large scale prototyping on industrial-sized 3D printers.

### Available colors



### Standard weights



# Premium PLA



Premium PLA (polylactic acid) is our general purpose PLA filament which yields reliable 3D printing with a quick crystallization process of 3D printed layers, resulting into a PLA filament that is suitable for 3D printing complex overhanging geometries. Premium PLA is standard available on large spool sizes and is often used for largescale printing with industrial-sized 3D printers.

## Key Features

- Reliable 3D printing
- Fast crystallization process of 3D printed layers
- Suitable for largescale prototyping and 3D printing complex geometries
- Compatible with AquaSolve for complex multi-extrusion 3D printing
- Easy to process at elevated print speeds
- Available on various spool sizes ranging from desktop formats to industrial-sized spools
- Biodegradable

## Applications

- Large-scale prototyping
- Manufacturing aids
- Complex conceptual models
- Visualization aids

### Available colors



### Standard weights





Galaxy PLA (polylactic acid) contains a high amount of added silver aluminium flakes, which gives 3D printed objects a sparkling and reflecting surface finish without any visible layers.

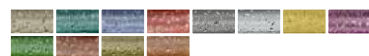
## Applications

- Aesthetics, design, and art
- Complex educational projects and models
- Household articles
- Visualization aids

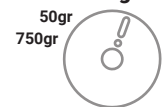
## Key Features

- Sparkling surface finish without visible layers
- Very easy to 3D print with improved flowing behaviour, excellent interlayer adhesion, and seamless build plate adhesion
- Compatible with AquaSolve for complex multi-extrusion 3D printing
- Wide range of standard color options available

### Available colors



### Standard weights



More information



StoneFil is a composite PLA (polylactic acid) filament which is gravimetrically filled with approximately 50% of powdered stone. Due to its high “stone-filling” StoneFil exhibits real stone-like aesthetics and high material density.

Objects printed in StoneFil will have a true matte stone-like surface finish with natural gradient colour linings. Each print will have its own identity with unique gradient colour shadings.

## Applications

- Aesthetics, design, and art
- Architectural mock-ups
- Visualization aids
- Educational projects and models

## Key Features

- Colour changing ability from anthracite grey to natural PLA at 29° C
- Very high stone-filling of 50%
  - Matte and rough stone-like surface finish
  - ±37% heavier than regular PLA
- Unique natural/organic gradient colouring
- Compatible with AquaSolve for complex multi-extrusion 3D printing
- Biodegradable

### Available colors



### Standard weights



More information

# MagicFil Thermo PLA



MagicFil Thermo PLA (polylactic acid) is modified with a thermochrome additive that enables the material to change colour when it reaches a temperature of 29° C or above. MagicFil Thermo PLA is coloured in anthracite grey when temperatures are lower than 29° C and turns into a natural PLA colour when the temperature is at 29° C or above.

## Applications

- Household tools
- Visualization aids
- Educational models

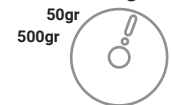
## Key Features

- Colour changing ability from anthracite grey to natural PLA at 29° C
  - Anthracite grey < 29° C > natural
- Compatible with AquaSolve PVA for complex multi-extrusion 3D printing
- Biodegradable

### Available colors



### Standard weights



# MetalFil



MetalFil Ancient Bronze and Classic Copper are composite PLA (polylactic acid) filaments that are gravimetrically filled with approximately 80% bronze or copper powder. The high filler content in MetalFil makes 3D printed objects nearly indistinguishable from genuine cast parts. MetalFil can be post-processed with various patina effects.

## Applications

- Aesthetics, design, and art
- Figurines and miniatures

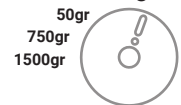
## Key Features

- Very high filling of 80%
- Real metal look, heavyweight, and "cool" metal feel
- Approximately 300% heavier than PLA (density of 3.5 g/cc)
- Compatible with full metal, PEEK, and PTFE hotends
- Compatible with direct drive and Bowden style extruders
- Compatible with  $\geq 0.4$ mm hardened nozzles with retraction settings enabled
- Easy to post-process
  - MetalFil can be brushed, sanded, polished, waxed, coated and patina post-processed

### Available colors



### Standard weights



# EasyCork



EasyCork is a composite PLA (polylactic acid) filament which is gravimetrically filled with approximately 30% cork fibres. EasyCork is a lightweight filament and exhibits cork-like aesthetics, such as a real cork look, feel, and smell.

## Applications

- Aesthetics, design, and art
- Architectural mock-ups
- Visualization aids
- Educational projects and models

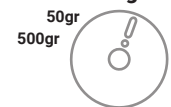
## Key Features

- Very high cork-filling of 30%
  - Real cork feel, look and smell
- Create different colour shadings
  - By postprocessing the printed object with a piece of fine grit sandpaper
  - By varying with the printing/extrusion temperature
- Compatible with AquaSolve for complex multi-extrusion 3D printing
- Biodegradable

### Available colors



### Standard weights



More information

# EasyWood



EasyWood is a composite PLA (polylactic acid) filament which is gravimetrically filled with approximately 40% grinded wood particles. EasyWood looks, feels and smells like real wood and wood-nerve structures can be created by grinding the printed object a bit with a piece of fine grit sandpaper, or by varying with the printing temperature.

## Applications

- Aesthetics, design, and art
- Architectural mock-ups
- Visualization aids
- Educational projects and models

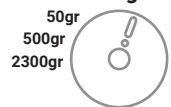
## Key Features

- Very high wood-filling of 40%
  - Real wood feel, look and smell
- Create wood-nerve structures
  - By postprocessing the printed object with a piece of fine grit sandpaper
  - By varying with the printing/extrusion temperature
- Compatible with AquaSolve for complex multi-extrusion 3D printing
- Biodegradable

### Available colors



### Standard weights



More information





Additive manufacturing is widely embraced by industries for research and development, prototyping and short-run manufacturing of end-use products. The demand for industrial-scale 3D printers and subsequently industrial-sized filament spools is rapidly growing.

A substantial part of Formfutura's industry leading filament types is standard available on industrial-sized spools, which are typically spooled with 2.3kg, 4.5kg, or even 8kg of filament. Additive manufacturing using Formfutura filaments is adopted by sectors such as aerospace, automotive, medical, transportation, energy, consumer products.

Besides our standard product offering and spool sizes nearly all Formfutura filaments can be custom spooled on spools that contain a weight up to 10kg of filament.

Whereas Formfutura's consumer-sized spools are made from recycled cardboard we also strive to package our industrial-sized packagings as sustainable as possible. Our industrial-sized spools are made from recycled ABS, which in turn is very easy to recycle again. The cardboard boxes used to package our industrial-sized spools are made from FSC certified and climate neutral recycled cardboard.

ReForm is a sustainable initiative within Formfutura to efficiently manage our own post-industrial waste-streams and to ReForm them into high-end upcycled filaments. The ideology behind ReForm is to make 3D printing more sustainable without having to make compromises on material properties and costprice.

During the production of filament there is a continuous flow of waste, such as:

- Filament being out of specification
- Changing colors on the extruders
- Changing materials on the extruders
- Incorrect colors
- Material that failed to pass quality control

This "waste-filament" is carefully sorted at the factory and shredded into granules. After that it is being homogenized, dried, made crystalline, and recompounded into various ReForm compounds and finally extruded as ReForm filament. As ReForm is 100% made from own post-industrial residual waste streams from extrusion, we know exactly what is inside and how to ReForm it into high-end filaments with material properties that are more than 99,5% the same as their virgin grade counterparts.

In today's society recycling and circular economy is getting more and more important and with ReForm you can now choose to make your 3D printing processes more sustainable without having to make compromises on materials properties.

Available colors



Standard weights

50gr  
1000gr



# HDglass



HDglass is a modified PETG (polyethylene terephthalate glycol) that combines extreme clarity, strength, durability, and dimensional stability into a 3D printer filament that is easy to process with optimized interlayer adhesion and limited warping. HDglass is hydrophobic, exhibits resistance to various chemicals and meets various EU and US food contact specifications.

## Applications

- Household tools
- Mechanical components and working mechanisms
- Packaging prototypes
- Visual and functional prototyping
- Containers and casings
- Short-run manufacturing

## Key Features

- Highly translucent and high gloss
  - 90% transmittance of optical light with only 1% of haze
- Minimal warping, good interlayer adhesion, and seamless build plate adhesion
- Strong, tough, durable, and excellent dimensional stability
- Good chemical resistance
- Food contact acceptable
- Compatible with Atlas Support for complex multi-extrusion 3D printing

### Available colors



### Standard weights

- 50gr
- 750gr
- 2300gr
- 4500gr
- 8000gr



# Platinum SLA Series



Platinum SLA Series is a general purpose photopolymer SLA resin that is specifically developed to work with all open source SLA, DLP, and LCD 3D Printers in the range of 385 - 405nm.

Our Platinum SLA resin is almost odorless and 3D prints with an extremely high accuracy and a very smooth surface finish.

## Applications

- Figurines and models
- Functional prototyping
- End-use products

## Key Features

- High resolution 3D printing with fine detail
- Almost Odorless processing
- Excellent dimensional accuracy and low shrinkage
- Low water absorption
- Compatible with all open source SLA, DLP, and LCD 3D printers in the range of 385 - 405nm

### Available colors



### Standard weights

- 500gr



# Dental LCD Series



Dental LCD Model Resin is a high-precision photopolymer resin designed for accurate modeling of dental models, aligner models, gums, teeth, crown and bridge models with removable dies. Dental LCD Model is specifically engineered to work with all open source LCD and DLP 3D printers in the range of 385 - 420nm.

Dental LCD Model resin has a surface finish and color similar to gypsum, which perfectly accentuates depth and detail in the dental model. Formfutura Dental LCD Model resin is meant for modeling purposes only and not for intraoral use.

## Key Features

- High-resolution 3D printing with fine detail
- Almost odorless processing
- Excellent dimensional accuracy and low shrinkage
- Gypsum-like texture and color
- Temperature resistant for dental aligner production
- Compatible with all open source LCD and DLP 3D printers in the range of 385 - 420nm

## Applications

- Models of dentures
- Implant models
- Crown and bridge models
- Models of gums
- Orthodontic models

### Available colors



# Platinum LCD Series



Platinum LCD Series is a general purpose photopolymer LCD resin that is specifically developed to work with all open source LCD and DLP 3D printers in the range of 385 - 420nm.

Our Platinum LCD resin is almost odorless and 3D prints with an extremely high accuracy and a very smooth surface finish. Our Platinum LCD Resin series are developed to 3D print with relatively short curing times.

## Key Features

- High resolution 3D printing with fine detail
- Almost Odorless processing
- Excellent dimensional accuracy and low shrinkage and low water absorption.
- Compatible with all open source DLP and LCD 3D Printers in the range of 385 - 405nm

## Applications

- Figurines and models
- Functional prototyping
- End-use products

### Available colors

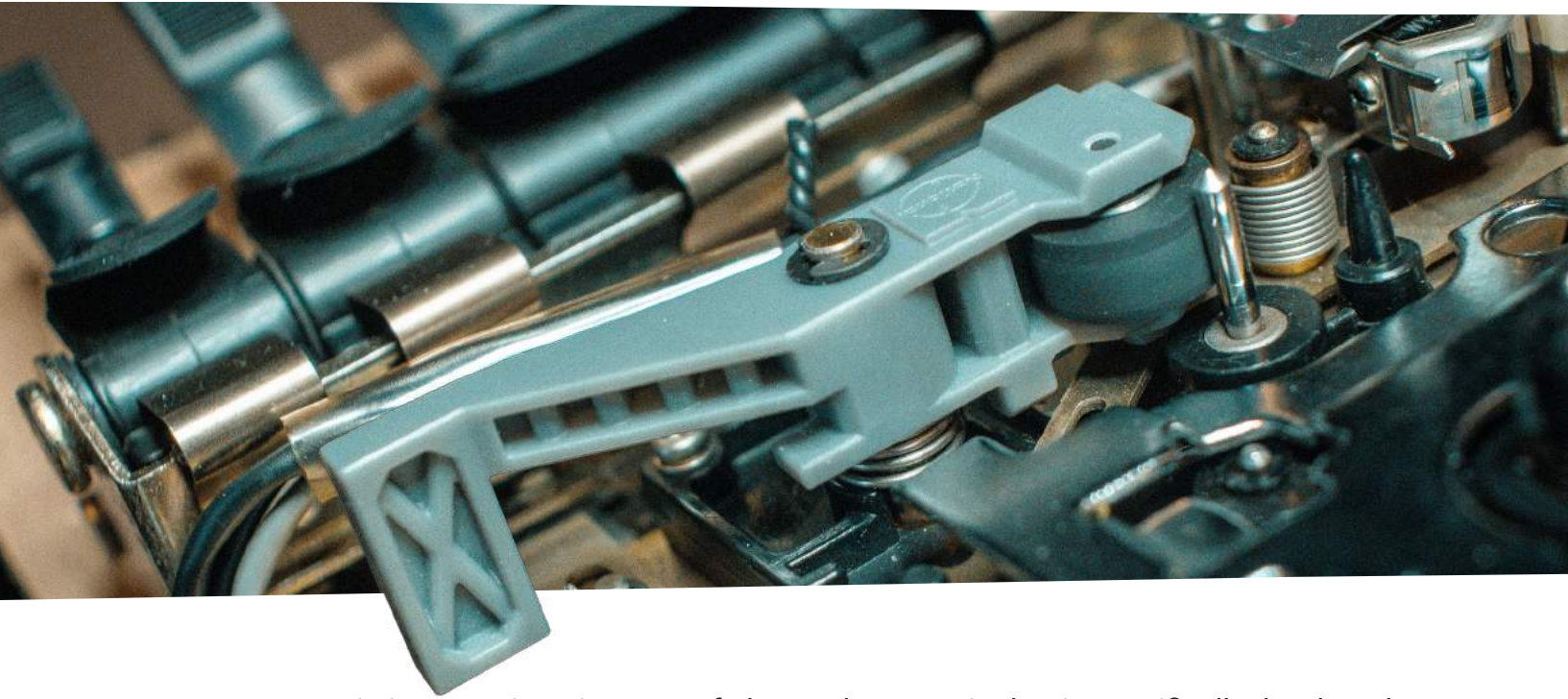


### Standard weights

500gr



# Engineering Series - Heavy Duty



Heavy Duty Resin is an engineering type of photopolymer resin that is specifically developed to work with all open source SLA, DLP, and LCD 3D Printers in the range of 385 – 405nm. Our Heavy Duty Engineering resin combines an impressive flexural strength with high temperature resistance and durability.

## Key Features

- Flexural strength of 135 MPa
- Stiff and durable
- High heat resistance of 128°C
- High dimensional accuracy and low shrinkage
- Almost odourless processing
- Compatible with all open source SLA, DLP, and LCD 3D printers in the range of 385 - 405nm

## Applications

- Tooling
- Jigs and fixtures
- Manufacturing aids
- Mold masters for low volume injection molding
- Functional prototyping

Available colors

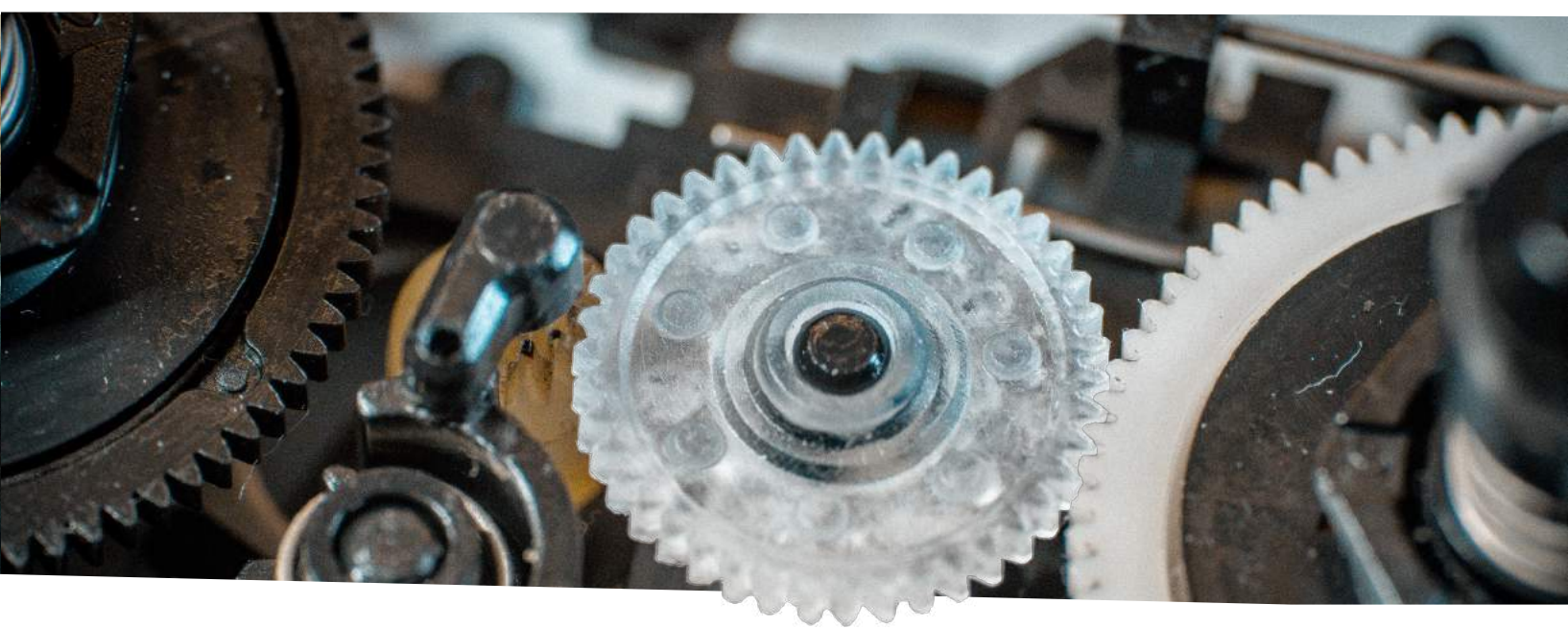


Standard weights  
500gr



More information

# Engineering Series - Tough Resin



Tough Resin is an engineering type of photopolymer resin that is specifically developed to work with all open source SLA, DLP, and LCD 3D Printers in the range of 385 – 405nm. Our Tough Engineering resin is extremely transparent and perfectly balances a high impact strength with semi-flexibility.

Its high level of toughness makes Formfutura Tough Resin ideal for creating strong and functional parts that will be exposed to repeatedly brief periods of intense stress or strain.

## Key Features

- High impact resistance
- Good UV and weather resistance
- Good fatigue resistance
- Extremely transparent with virtually no discoloration and/or yellowing
- High dimensional accuracy and low shrinkage
- Almost odourless processing
- Compatible with all open source SLA, DLP, and LCD 3D printers in the range of 385 - 405nm

## Applications

- Snap-fit assemblies
- Tooling
- Functional prototyping
- Protective cases
- Outdoor parts
- Short-run manufacturing

Available colors

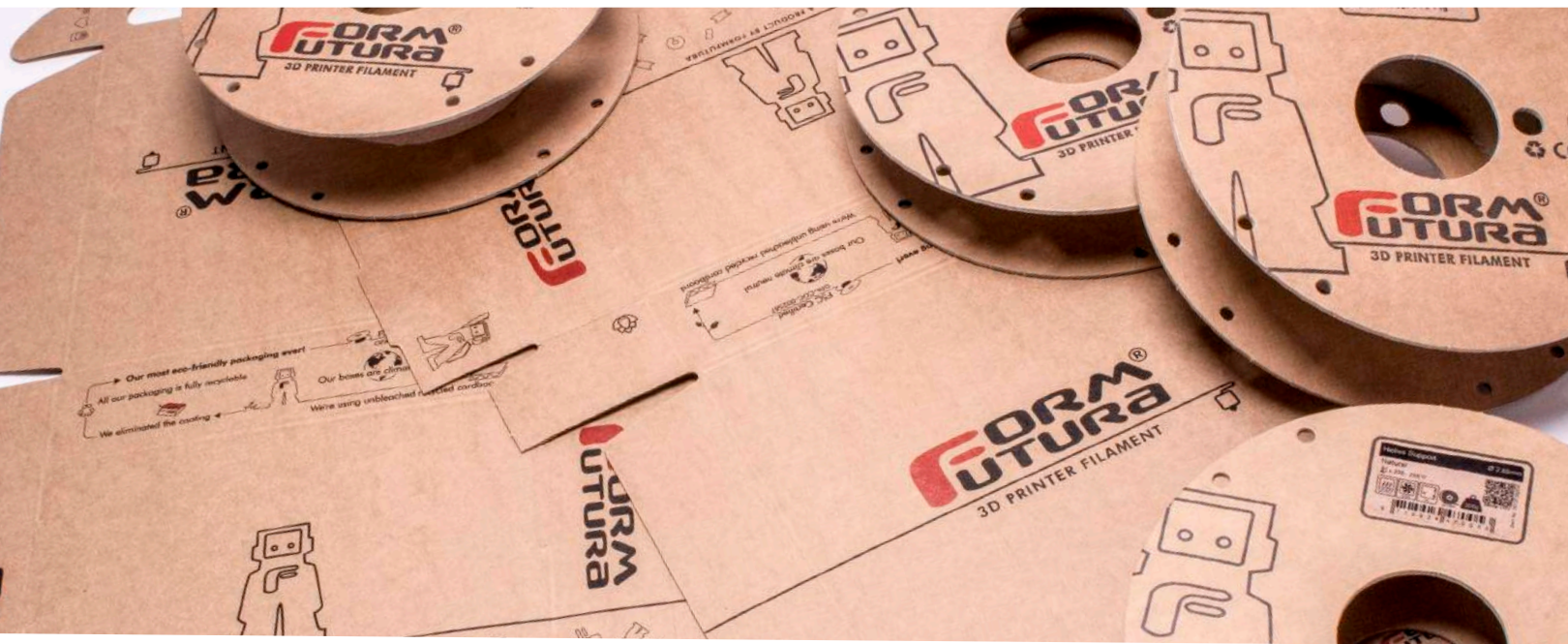


Standard weights  
500gr



More information

# Frontrunner In Sustainability



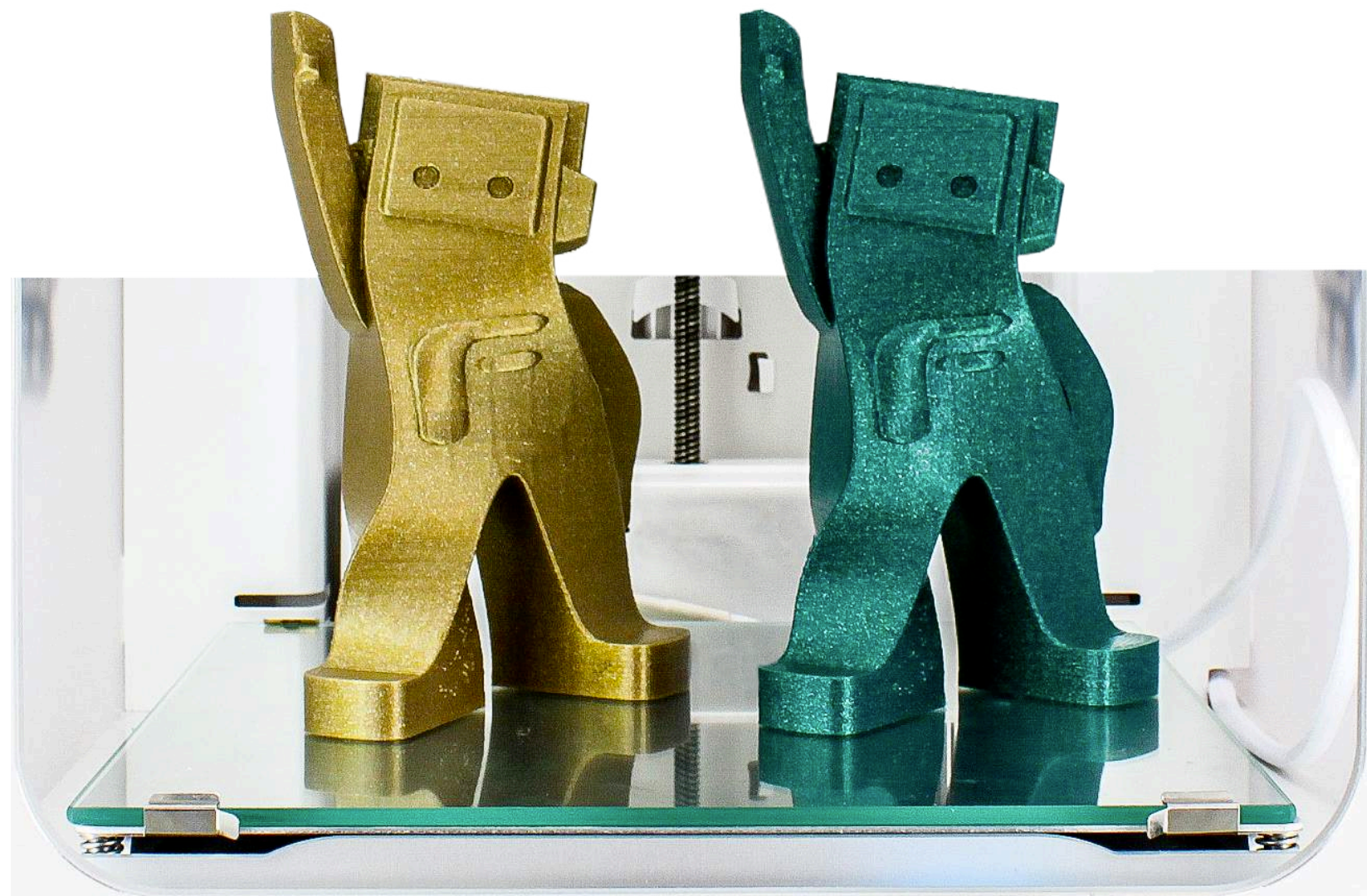
As a leading supplier of filaments, Formfutura wants to set an example for the industry by raising awareness about sustainability whilst doing our part to help realize a better tomorrow. In order to lower our footprint our consumer packaging for all filaments up to 1kg are spooled onto fully recyclable, sturdy cardboard spools. The boxes our consumer-sized spools come in are made out of recycled cardboard. Both our cardboard spools and cardboard boxes are made from recycled cardboard that is FSC certified and climate neutral.

## Say hi to our Mascot Fil Futura!

We print Fil in all our materials. Both to test the material ourselves and to share a picture of Fil for every material and in every color in our shop. That way you don't see only a roll of filament, but a real print with the filament you are about to use.

## Why Cardboard?

- Cardboard is a natural desiccant (drying agent) and the cardboard spool will protect your filament even more against humidity.
- Many engineering type of filaments require to be pre-dried at elevated temperatures for a prolonged period of time and cardboard spools can be dried at much higher temperatures than plastic spools due to the risk of deformation in plastic spools.
- As our cardboard spools are manufactured in the Netherlands we are actively minimizing the total travel distance and which logistically helps us to reduce our carbon footprint even further!
- Recycling cardboard spools and packaging can easily be arranged via existing paper recycling programs.

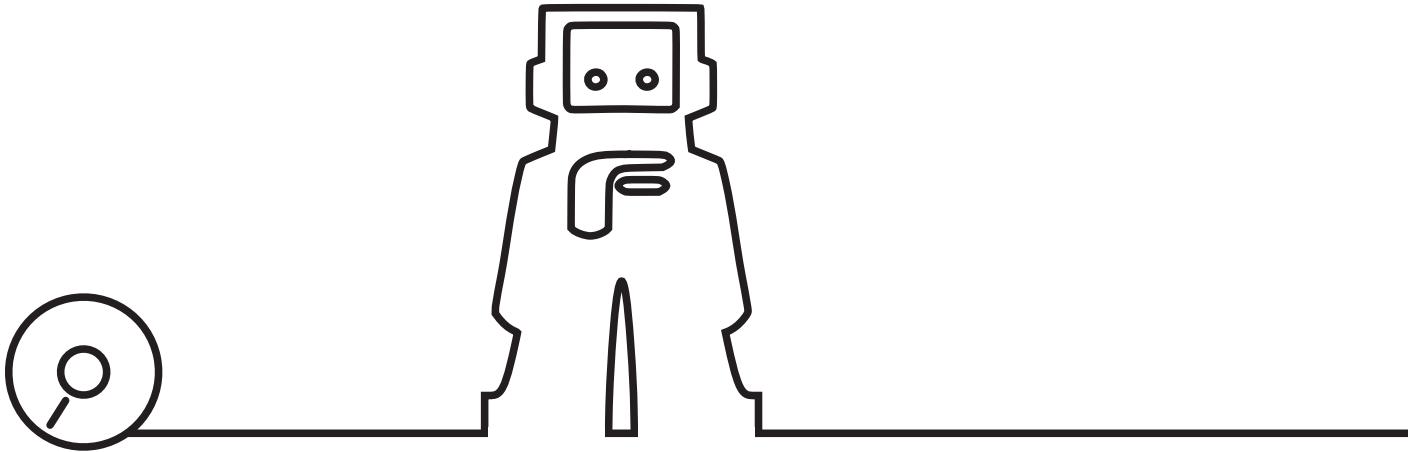


# PVA Compatibility List

|                        | AquaSolve PVA | Atlas Support | Helios Support |
|------------------------|---------------|---------------|----------------|
| ABSpro                 | -             | -             | +              |
| ABSpro Flame Retardant | -             | -             | +              |
| ApolloX                | -             | -             | ++             |
| CarbonFil              | -             | ++            | -              |
| Centaur PP             | No data       | No data       | No data        |
| ClearScent ABS         | -             | -             | ++             |
| Crystal Flex           | -             | -             | +              |
| EasyCork               | +             | +/-           | -              |
| EasyFil ABS            | -             | -             | ++             |
| EasyFil HIPS           | -             | -             | ++             |
| EasyFil PLA            | ++            | +             | -              |
| EasyWood               | ++            | +             | -              |
| FlexiFil               | No data       | No data       | No data        |
| Galaxy PLA             | ++            | +             | -              |
| HDglass                | -             | ++            | -              |
| MagicFil Thermo PLA    | ++            | +             | -              |
| Matt PLA               | ++            | +             | -              |
| MetalFil               | No data       | No data       | No data        |
| Pegasus PP UltraLight  | No data       | No data       | No data        |
| Premium ABS            | -             | -             | ++             |
| Premium PLA            | ++            | +             | -              |
| Python Flex            | -             | -             | ++             |
| ReForm rPet            | -             | ++            | -              |
| ReForm rPLA            | ++            | +             | -              |
| ReForm rTitan          | -             | -             | ++             |
| Silk Gloss PLA         | ++            | +             | -              |
| StoneFil               | +             | +/-           | -              |
| STYX-12                | No data       | No data       | No data        |
| TitanX                 | -             | -             | ++             |

# Print Settings Reference

|                        | Nozzle size | Print temp     | Bed temp      | Layer Height | Fan speed   | Enclosure   |
|------------------------|-------------|----------------|---------------|--------------|-------------|-------------|
| ABSpro                 | ≥ 0.15mm    | ± 245 - 275 °C | ±100 - 120 °C | ≥ 0.10mm     | ± 0 - 30%   | Yes         |
| ABSpro Flame Retardant | ≥ 0.15mm    | ± 240 - 265 °C | ±100 - 120 °C | ≥ 0.10mm     | ± 0 - 30%   | Yes         |
| ApolloX                | ≥ 0.15mm    | ± 235 - 255 °C | ± 80 - 100 °C | ≥ 0.10mm     | ± 0 - 30%   | Yes         |
| AquaSolve - PVA        | ≥ 0.15mm    | ± 190 - 210 °C | ± 0 - 60 °C   | ≥ 0.10mm     | ± 0 - 30%   | No          |
| Atlas Support          | ≥ 0.15mm    | ± 180 - 210 °C | ± 0 - 60 °C   | ≥ 0.10mm     | ± 0 - 30%   | No          |
| CarbonFil              | ≥ 0.40mm    | ± 230 - 265 °C | ± 0 - 60 °C   | ≥ 0.20mm     | ± 50 - 100% | No          |
| Centaur PP             | ≥ 0.15mm    | ± 220 - 240 °C | ± 0 - 65 °C   | ≥ 0.10mm     | ± 50 - 100% | No          |
| ClearScent ABS         | ≥ 0.15mm    | ± 220 - 260 °C | ± 90 - 100 °C | ≥ 0.10mm     | ± 0 - 30%   | Recommended |
| Crystal Flex           | ≥ 0.15mm    | ± 230 - 260 °C | ± 80 - 100 °C | ≥ 0.10mm     | ± 0 - 30%   | No          |
| EasyCork               | ≥ 0.4 mm    | ± 215 - 260 °C | ± 0 - 60 °C   | ≥ 0.20mm     | ± 50 - 100% | No          |
| EasyFil ABS            | ≥ 0.15mm    | ± 225 - 270 °C | ± 90 - 110 °C | ≥ 0.10mm     | ± 0 - 30%   | Recommended |
| EasyFil HIPS           | ≥ 0.15mm    | ± 220 - 260 °C | ± 90 - 110 °C | ≥ 0.10mm     | ± 0 - 30%   | No          |
| EasyFil PLA            | ≥ 0.15mm    | ± 200 - 230 °C | ± 0 - 60 °C   | ≥ 0.10mm     | ± 50 - 100% | No          |
| EasyWood               | ≥ 0.40mm    | ± 210 - 240 °C | ± 0 - 60 °C   | ≥ 0.20mm     | ± 50 - 100% | No          |
| FlexiFil               | ≥ 0.15mm    | ± 220 - 260 °C | ± 90 - 110 °C | ≥ 0.10mm     | ± 50 - 100% | No          |
| Galaxy PLA             | ≥ 0.4 mm    | ± 215 - 235 °C | ± 0 - 60 °C   | ≥ 0.15mm     | ± 50 - 100% | No          |
| HDglass                | ≥ 0.15mm    | ± 200 - 240 °C | ± 60 - 80 °C  | ≥ 0.10mm     | ± 30 - 100% | No          |
| Helios Support         | ≥ 0.15mm    | ± 235 - 255 °C | ± 65 - 75 °C  | ≥ 0.10mm     | ± 0 - 30%   | No          |
| LimoSolve              | ≥ 0.15mm    | ± 220 - 260 °C | ± 90 - 110 °C | ≥ 0.10mm     | ± 20 - 50%  | No          |
| MagicFil Thermo PLA    | ≥ 0.15mm    | ± 200 - 230 °C | ± 0 - 60 °C   | ≥ 0.10mm     | ± 50 - 100% | No          |
| Matt PLA               | ≥ 0.4mm     | ± 210 - 235 °C | ± 0 - 60 °C   | ≥ 0.10mm     | ± 50 - 100% | No          |
| MetalFil               | ≥ 0.40 mm   | ± 215 - 235 °C | ± 0 - 60 °C   | ≥ 0.20mm     | ± 50 - 100% | No          |
| Pegasus PP UltraLight  | ≥ 0.40mm    | ± 215 - 245 °C | ± 0 - 100 °C  | ≥ 0.10mm     | ± 50 - 100% | No          |
| Premium ABS            | ≥ 0.15mm    | ± 220 - 270 °C | ± 90 - 110 °C | ≥ 0.10mm     | ± 0 - 30%   | Recommended |
| Premium PLA            | ≥ 0.15mm    | ± 200 - 230 °C | ± 0 - 60 °C   | ≥ 0.10mm     | ± 50 - 100% | No          |
| Python Flex            | ≥ 0.25mm    | ± 220 - 250 °C | ± 0 - 60 °C   | ≥ 0.10mm     | ± 50 - 100% | No          |
| ReForm rPet            | ≥ 0.15mm    | ± 200 - 240 °C | ± 65 - 75 °C  | ≥ 0.10mm     | ± 0 - 30%   | No          |
| ReForm rPLA            | ≥ 0.15mm    | ± 200 - 230 °C | ± 0 - 60 °C   | ≥ 0.06mm     | ± 50 - 100% | No          |
| ReForm rTitan          | ≥ 0.15mm    | ± 240 - 265 °C | ± 80 - 90 °C  | ≥ 0.10mm     | ± 0 - 30%   | Recommended |
| Silk Gloss PLA         | ≥ 0.15mm    | ± 215 - 230 °C | ± 0 - 60 °C   | ≥ 0.10mm     | ± 50 - 100% | No          |
| StoneFil               | ≥ 0.40mm    | ± 215 - 240 °C | ± 0 - 60 °C   | ≥ 0.2mm      | ± 50 - 100% | No          |
| STYX-12                | ≥ 0.15mm    | ± 240 - 270 °C | ± 80 - 120 °C | ≥ 0.10mm     | ± 0 - 30%   | Yes         |
| TitanX                 | ≥ 0.15mm    | ± 240 - 265 °C | ± 70 - 100 °C | ≥ 0.10mm     | ± 0 - 30%   | Recommended |
| Volcano PLA            | ≥ 0.2mm     | ± 230 - 255 °C | ± 0 - 60 °C   | ≥ 0.06mm     | ± 50 - 100% | No          |



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