

Spectrum

3D Printing Filament Manufacturer



About us

- Same and the same
- Leading European 3D filament manufacturer
- 1.5 milion kg annual production capacity
- > 80+ various filaments in portfolio
- Customer oriented company
- → Focused on sustainable production

Social media:

@spectrumfilaments

f /spectrumfilaments

Website:

S www.spectrumfilaments.com

Our company

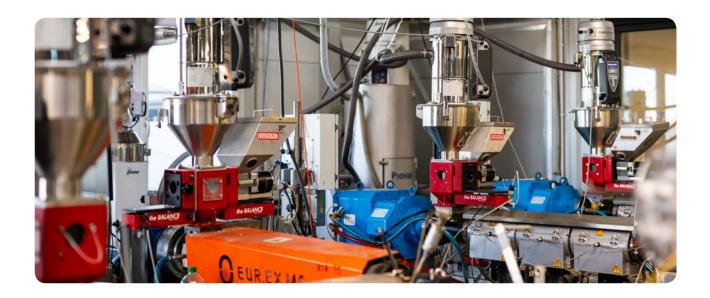
Our company is a dynamically growing manufacturer and supplier in the 3D printing materials industry, specializing in the production of 3D filaments used in FDM/FFF technology printers. Based on many years of experience and advanced technological solutions, we deliver top-quality 3D filaments that meet the needs of both individual and institutional customers. Thanks to our advanced production facilities, we have become one of the key players in the European 3D filament market.

We are open to new ideas and ready to meet customer expectations, offering a wide portfolio of 3D printing materials and the production capacity of one of the largest filament manufacturers in Europe. With an annual production capacity of approximately 1.5 million kilograms of 3D filament, we are able to fulfill large orders and quickly respond to the dynamic needs of the market.

Wide product portfolio

Today, our company offers one of the most extensive product portfolios in the 3D printing filament market. Our range includes over 80 different types of filaments, varying in aesthetics, strength parameters and potential applications. Our filament line can be divided into a basic and an industrial series, as our products include both decorative materials suitable for printing intricate details and models requiring precise finishing, as well as filaments with high resistance to temperature, mechanical loads and external conditions.

Our wide product range allows us to meet the needs of the most demanding customers from various sectors of the economy, such as the automotive, medical, architectural and applied arts industries. Discover the full potential of 3D printing with our products and bring even the most multidimensional project to the real world.





Customer oriented

In our company, we adhere to three fundamental principles that form the pillars of our operations: prioritizing customer needs, ensuring the highest quality and constantly investing in innovation. Every customer, regardless of their business scale, is equally important to us—our team is always ready to tailor the offer to individual needs and requirements. This enables us to realize both standard orders and customized solutions within contract manufacturing (white label).

Our philosophy is also based on the belief that product quality and meeting customer needs are paramount, which is why each spool of filament leaving our factory must meet strict standards, and we continuously invest in technological development to meet the highest benchmarks.

Sustainability in focus

Our company cares for the environment, which is reflected in our sustainable production approach. We continuously expand our offering with environmentally friendly filaments, including biodegradable materials and recycled plastics. In an effort to minimize our ecological footprint, we produce filaments on eco-friendly cardboard spools and all our production processes are optimized to reduce raw material and energy consumption. Additionally, we have introduced the innovative Refill series, which includes filaments supplied without traditional plastic spools, making them more environmentally friendly. Furthermore, our filament packaging is made from FSC-certified material, ensuring it comes from responsibly managed sources.





European production

All our filaments are produced in a factory in Poland, giving us full control over every stage of production. We are proud that our products are made in Europe – this is a guarantee of high quality, support for local economies, and efficient operations. European production also means greater transparency and compliance with strict standards, ensuring that every filament is reliable in use. Local production not only ensures smooth operation but also shortens supply chain, allowing us to operate with an environmentally conscious mindset and provide fast deliveries.

Our brands:





→ more on page 26



more on page 28

Why Spectrum Filaments?

High-quality filament manufacturer

Extrusion know-how

We pride ourselves in our expertise in extrusion techniques, ensuring our filaments meet the highest standards of quality and precision

High production capacity

Allows us to fulfill both small and large-scale orders, ensuring a reliable and consistent supply

Private label services

Allowing to customize and brand our premium filaments with customer's labels, fostering collaboration and tailoring products to customer's unique needs

Continuous development

We are at the forefront of innovation, consistently pioneering new materials and technologies to meet the evolving needs of the industry and our customers

European manufacturing

We maintain proximity to our customers, enabling us to offer efficient and responsive services with a commitment to European quality standards

Rigorous quality control system "Verify your spool"

We guarantee that each filamenta meets our strict quality standards, assuring customers of the reliability of our products

Technical support

Providing expert assistance to ensure a seamless and trouble-free 3D printing experience

Effective and transparent cooperation



Extremly attractive distributor terms

High discounts ensure a strong starting position & fast growth potential



Ability to establish exclusivity for territories / materials

Competitive edge & protecting market share



Marketing support for distributors

To boost your sales efforts, driving faster returns & increasing profitability



Partnership growth opportunities

Valued long-term, mutually beneficial relationships with room for expansion & collaboration



Diverse product range

80+ filaments & 3 brands allowing to serve a variety of industries & customers



Significant brand reputation

Well-established brand boosts credibility & trust



Dedicated 3D printing resources

Daily support for our distributors & their customers make the most of our filaments



Immediate stock availability of our brands

Quick response to customer demand & increased sales efficiency



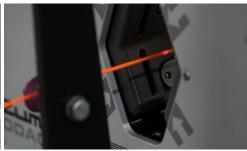
B2B online portal

Efficient & seamless online ordering











Filament for 3D printers is manufactured by the method of free extrusion. This is one of the most difficult processing techniques by extrusion, due to the particularly large impact of process parameters on product dimensions and material homogenization.

Our technological know-how and experience in filament production allow us to obtain a high-quality final product. To prove this, Spectrum Filaments, as one of the few manufacturers in the world, has introduced individual spool parameter reporting that includes:

- ✓ The course of diameter on the entire length of the spool,
- ✓ Mean diameter,
- ✓ Ovality,
- ✓ Standard deviation.

During the production each 1 mm of filament is being continuously measured in 2 axes with \pm 0.8 μ m accuracy. To be sure that the measurement result is reliable we use certified laser meter devices.

Verify your spool

The most precise quality control system on the market



Scan for details



Rj4hAYZ2 SPOOL ID

How does the verification system work?



Get your Spectrum Filament spool



Each spool contains an individual spool ID with OR code



Scan QR code or visit verify.spectrumfilaments.com and enter your spool ID

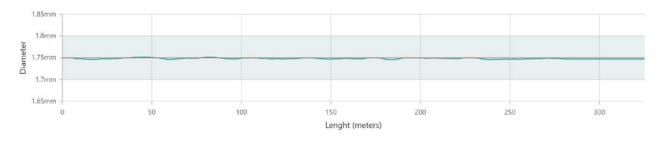




Check ovality, mean diameter and standard deviation of your spool



Atribute	Value
Id	Rj4hAYZ2
Material	ASA
Color	LION ORANGE
Weight	1 kg
Diameter	1.75 mm
Mean diameter	1.748 mm
Ovality	0.72%
Standard deviation	2.22 µm
Temperature	200 - 240 °C
Hot pad	40 - 60 °C
Date of production	19.09.2023



Color Wish new

Spectrum Filaments Color Wish - PLA Filament in your color

Are you planning a unique 3D project that requires a custom color? Color Wish is a new service from Spectrum that allows you to perfectly match the shade of PLA filament to your needs. With Color Wish, you can choose any color from a selection of **over 200 shades from the RAL Classic palette** or selected colors from RAL D2 Design Plus, taking your 3D printing project to the next level. If you're looking for a specific shade outside of the RAL Classic or RAL D2 Design Plus palette the Color Wish service makes it easy and quick to order. Just send us a message, and we'll take care of the rest.

How to order a custom color?

If you're looking for a specific color from the RAL Classic or RAL D2 Design Plus palette, you can easily check in our online store the whole range of available shades, which have been precisely matched and approved. However, if you don't find the right color in our database, you can contact us to have it created just for you. For custom color orders, use our online contact form. Our team will respond to your inquiry within 24 hours to discuss the details and ensure your order is processed as quickly as possible.



Full customization - even if you only need one spool

Color Wish not only offers a wide range of colors but also flexible ordering options. You can place an order starting from just one 1kg spool, allowing full personalization even with small quantities. This solution gives you complete control over the appearance of your project, regardless of production scale.

Color Wish is more than just another filament on the market – it's an opportunity to collaborate with a company that understands your need for customization. With low order thresholds and high-quality PLA filaments, Spectrum Filaments helps create products that stand out in the market.

Discover the full potential of customization & give your projects a unique character with Color Wish from Spectrum Filaments.

Create without limits!



Over 200 RAL colors and custom shades

We offer a wide selection of 213 colors from the RAL Classic palette and selected colors from RAL D2 Design Plus palette, along with the ability to create custom colors.



→ Minimum order – 1kg

Orders for custom colors start from just one spool weighing 1kg ensuring full flexibility.



Fast delivery

Your custom PLA filament in RAL Classic colors can be ready and shipped within just 5 business days. For individual colors, the production time may be slightly longer.



Competitive pricing for larger orders

The larger the order, the lower the filament price per kilogram.



Simple & eco-friendly solution

Easy-to-use, high-quality filaments wound on an eco-friendly cardboard core, reducing plastic waste.

Full compatibility

Fully compatible with Bambu Lab reusable spools and AMS systems, as well as printers like Prusa, Creality, FLSun & Raise 3D. No need for additional adapters.

Customizable spools

Option to download or purchase a master spool directly from the Spectrum website.

Packaging

FSC-certified packaging that supports responsible environmental practices.

Spectrum ReFill

Spectrum ReFill Filament is our new solution that combines ease of use with environmental consciousness. ReFill filaments are wound onto an eco-friendly, cardboard core that is fully compatible with BambuLab 3D printer reusable spools. This innovative approach eliminates the need for additional adapters, making filament usage easier while simultaneously reducing waste.

You can also use your own 3D printed spool using Spectrum's design, which can be easily downloaded free of charge from our website or purchase ready-to-use directly from our online store. Moreover, our printed spools are compatible with the BambuLab AMS system as well as many other 3D printers such as Prusa, Creality, FLSun, and Raise 3D, offering even greater flexibility and convenience.



Compatible with Bambu Lab reusable spools



Compatible with our Spectrum ReFill spools

Download Spectrum Spool for 3D print

Print your own spool using our design!



Desktop filaments color table - ReFills

PLA Premium High Speed



PLA Premium

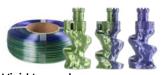


PLA Magic SILK

















Forest Flame Magenta Blossom

Solar Eclipse

PLA SILK Rainbow













PLA SILK

















Pearl White



Unmellow









Gold



Taffy Pink

















Amethyst Violet

Indigo Blue

Candy

Blue

Sterling Silver

Sapphire Blue

Tropical Green

Apple Green

Aluminum Silver

Pastello PLA



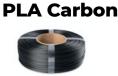












Carbon Black

Carbon Black

Lemon Cream Apricot Orange

Pale Salmon



Holland Red

Pink Pastel







Blue



Water Blue



Cocktail

Green

ASA-X CF10

Bonbon Rose Cosmetic Mauve Atmospheric

rPLA





Yellow Orange







Leaf Green





rPET-G

















Porcelain White Signal Yellow

Yellow Orange

Carmine Red

Signal Blue

ASA 275



PET-G Premium



Desktop filaments color table - Spools

PLA Premium High Speed

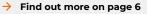




Neon Orange Neo Green UV

Didn't find a color you need?

Now you can order PLA filaments in custom colors!





PLA Premium



PLA Pro



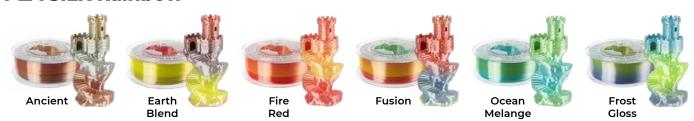
PLA Magic SILK



PLA SILK Rainbow

Magenta

Blossom



Solar Eclipse

PLA SILK

Forest Flame





PLA FlameGuard



Polar White













Light Grey

Technical Red

Performance Blue

Industrial Grey

Deep Black

PLA Metal







Brass

Copper

Bronze

Huracan PLA

















Signal White

Light Grey

Cream Beige Banana Yellow

Lion Orange

True Red

Ola! Pink

Purple Grape













Royal Blue

Baby Blue

Fresh Green Anthracite Grey

Aluminium Silver

Traffic Black

SafeGuard PLA

















Polar White

Light Grey

Bahama Yellow

True Red

Dark Blue

Performance Blue

Baby Blue

Lime Green







Midnight **Black**

PLA Crystal













Electric Yellow Neon Orange Raspberry Red Frozen Berry

Blue Horizon

Light Weight PLA





Light Grey



Lion Orange



Pure Red



Persian Blue



Dark Grey



Pure White



PLA Tough

Natural







Deep Black

PLA Glitter















Clear Gold

Aztec Gold

Aurora Gold

Sparkle Red

Violet

Stardust Blue Emerald Green Volcano Grey



Silver Metallic

PLA MATT



















Polar White

Bahama Yellow

Lion Orange

Bloody Red

Navy Blue

Lime Green

Dark Grey

Deep Black

PLA Glow in the Dark







PLA Carbon







Yellow Green

Blue

Carbon Black

Carbon Red

Carbon Grey

Carbon Green

PLA Stone Age







Stone Age Dark

WOOD



Natural



Oak



Ebony Black

PLA Thermoactive



Thermoactive Red

PLA Nature







Pils Beer









Hemp



Algae Nori

Algae













Signal White Anthracite Grey Traffic Black Strawberry Red Light Blue



GreenyPro















Pure White

Light Grey

Dark Grey

Traffic Black

Pure Orange

Pure Red Ultramarine Blue Real Green

rPLA



Signal White



Yellow Orange



Signal Red



Signal Blue



Green



Basalt Grey



Black

rPET-G



Porcelain White



Signal Yellow



Yellow Orange



Carmine Red



Signal Blue



Traffic Green



Iron Grey



Traffic Black

Smart ABS



Polar White



Coral



Bahama Yellow



Lion Orange



Dragon Red



Pacific Blue



Forest Green



Silver Star



Dark Grey



Deep Black

ASA 275



Natural



Polar White



Traffic Yellow





Lion Orange



Bloody Red



Brown Red



Navy Blue



Pacific Blue



Lime Green



Forest Green



Dark Grey



Silver Star



Deep Black

FlameGuard ASA 275



Polar White



Bloody Red



Navy Blue



Silver Star



Dark Grey



Deep Black

ASA-X CF10

ASA-X GF10

HIPS-X



White





Dragon



Deep Black



Carbon Black



White



Black



Yellow

Red

15

PET-G Premium High Speed



Arctic White



Light Grey



Light Ivory



Sulfur Yellow



Lion Orange



Heart Red



Navy Blue



Pastel Blue



Olive Green



Bright Green



Silver Star



Dark Grey



Deep Black



Transparent Red



Transparent Blue

PET-G Premium



Arctic White



Glassy



Bahama Yellow Signal Yellow





Beige



Lion Orange



Bloody Red



Pink



Navy Blue



Pacific Blue



Iceland Blue



Turquoise Blue



Lime Green



Mint Green



Olive Green



Bottle Green



Chocolate Brown



Pearl Gold



Silver Star



Anthracite Grey







Deep **Black**



Transparent Yellow



Transparent Orange



Transparent Red



Transparent Blue



Transparent Black



Wizard Charcoal



Dark

Grey

Wizard Green



Wizard Indigo

PET-G Glitter



Aurora Gold



Stardust Blue

PET-G Carbon



Carbon Black



Carbon Grey



Carbon **Anthracite**





Carbon Purple Carbon Lime

PET-G MATT



Polar White



Lion Orange

Deep Black



Bloody Red



Navy Blue



Desert Storm





Sand Khaki Brown Uniform



Olive Green

Dark Grey





PET-G FR V0

PET-G Glow in the Dark

PCTG CF10

PCTG GF10



Natural



Black



Yellow Green







PET-G/PTFE







Light Blue





Signal White **Traffic Red**

Iron Grey

Traffic Black

PCTG Premium

















Arctic White



Pure Orange



Navy Blue



Light Green

Silver Steel



Iron





Transparent









Grey

Traffic **Black**

Transparent Yellow

Orange

Red

Blue

Transparent Green

S-Flex 85A/90A/98A























Polar White

Bahama Yellow

Lion Orange

Bloody Red

Pacific Blue

Lime Green

Deep Black

Glow in the Dark

S-Flex Carbon





Natural



PC CF

Black

Black

PC 275

















Natural

Traffic White

Signal Yellow

Lion Orange

Traffic Red

Navy Blue

Lime Green

Iron Grey













Traffic Black

Transparent Yellow

Transparent Orange

Transparent Red

Transparent Blue

PA₆ **Low Warp**



Natural

Black

PA₆ **Low Warp GF30**



Natural



Black

PA₆ **Low Warp CF15S**



Black

PA12 CF15



Black

Industrial filaments color table

PA6 CF15

PA6 GK10

PA6 Neat NT PA6 Neat BK PA6 CS20 FR VO







Natural



Natural



Black



Black

PET-G HT100



Pure White



Clear



Silver Steel



Iron Grey



Obsidian Black



Traffic Red



Transparent Blue

PET-G FX120



Natural



Dark Grey



Obsidian Black

PET CF15



Black

PP



Natural

PPS AM230



Natural

ABS GP450



Natural



Pure White



Silver



Obsidian Black



Traffic Red



Dark Blue



Pure Green

ABS Medical ABS Kevlar ASA Kevlar



Natural



Black



Natural



Black

PC/ABS FR VO



White



Black



PC/PTFE

Natural

Filament sets for start

Ideal to begin your 3D printing journey!



Eco-friendly cardboard spools Always 5 spools 0.25 kg each Various materials & colors







5 PACK

PLA Magic SILK new

1.75 mm (5x 0.25 kg)

PLA Magic SILK Aurora Bloom PLA Magic SILK Solar Flare PLA Magic SILK Raspberry Blush PLA Magic SILK Mystic Orchid PLA Magic SILK Golden Berry

5 PACK

PLA Premium

1.75 mm (5x 0.25 kg)

PLA Premium Polar White PLA Premium Deep Black PLA Premium Lion Orange PLA Premium Pacific Blue PLA Premium Lime Green

5 PACK

PLA Crystal

1.75 mm (5x 0.25 kg)

PLA Crystal Blue Horizon PLA Crystal Electric Yellow PLA Crystal Frozen Berry PLA Crystal Neon Green PLA Crystal Neon Orange

PLA Specials

1.75 mm (5x 0.25 kg)

PLA Stone Age Light PLA Stone Age Dark PLA Thermoactive Red PLA Glow in the Dark Yellow-Green WOOD Oak

5 PACK

PET-G Premium

1.75 mm (5x 0.25 kg)

PET-G Premium Arctic White PET-G Premium Deep Black PET-G Premium Lion Orange PET-G Premium Navy Blue PET-G Premium Lime Green

5 PACK

Premium PLA Essentials

1.75 mm (5x 0.25 kg)

PLA Premium Wizard Indigo PLA Premium Wizard Green PLA Premium Wizard Charcoal PLA Premium Caribbean Blue PLA Premium Translucent

5 PACK

Pastello PLA

1.75 mm (5x 0.25 kg)

Pastello PLA Apricot Orange Pastello PLA Atmospheric Blue Pastello PLA Bonbon Rose Pastello PLA Lemon Cream Pastello PLA Cocktail Green

Material Mix #1

1.75 mm (5x 0.25 kg)

PLA Premium Navv Blue PET-G Premium Bloody Red PCTG Premium Iron Grey PLA SILK Amethyst Violet ASA 275 Traffic Yellow

5 PACK **PLA SILK**

1.75 mm (5x 0.25 kg)

PLA SILK Glorious Gold PLA SILK Spicy Copper PLA SILK Apple Green PLA SILK Indiao Blue PLA SILK Ruby Red

5 PACK **PCTG Premium**

1.75 mm (5x 0.25 kg)

PCTG Premium Arctic White PCTG Premium Deep Black PCTG Premium Lion Orange PCTG Premium Transparent Green PCTG Premium Clear

Material Mix #2

1.75 mm (5x 0.25 kg)

PET-G MATT Deep Black rPLA Leaf Green rPETG Signal Yellow PLA Pro Lion Orange PET-G HT100 Pure White

5 PACK **PLA Glitter**

1.75 mm (5x 0.25 kg)

PLA Glitter Aurora Gold PLA Glitter Volcano Grey PLA Glitter Clear Gold PLA Glitter Silver Metallic PLA Glitter Stardust Blue

5 PACK

ASA 275

1.75 mm (5x 0.25 kg)

ASA 275 Polar White ASA 275 Deep Black ASA 275 Silver Star ASA 275 Navy Blue ASA 275 Bloody Red

Carbon Set

1.75 mm (5x 0.25 kg)

PLA Carbon PET-G Carbon ASA-X CF10 PCTG CF10 PA6 LW CF15S

Desktop filaments

Bio-based

	Dio-pased	
new	PLA Premium High Speed	Fast, high-quality prints; speed up to 800mm/s; reliable; great dimensional stability
	PLA Premium	High quality PLA, biodegradable, user friendly, very wide range of colors
	PLA Pro	Alternative to ABS, high impact strength, improved heat-resistance & flow index
new	PLA Magic SILK	Dual-color transitions; co-extrusion technology; smooth surface; ideal for artistic and decorative prints
new	PLA SILK Rainbow	Multicolor gradient; vibrant, shiny finish; perfect for decorative, eye-catching 3D prints
	PLA SILK	Original, phenomenal colors; unique aesthetic properties, user friendly
	Pastello PLA	Beautiful pastel shades, unique matte print finish, eco-friendly cardboard spool, recycled content
new	PLA Metal	Metal-filled; metallic look & feel; more than 3x heavier than standard PLA; suitable for artistic models
new	FlameGuard PLA	Halogen-free, flame-retardant PLA; eco-friendly; UL94 V0; 7x lower carbon footprint than ABS FR
	Huracan PLA	High flow rate enabling fast printing (up to 350 mm/s), high strength comparable to ABS
new	SafeGuard PLA	Antibacterial properties; safe for food contact; slows algae growth; ideal for hygiene products
	PLA Crystal	Transparent, semi-crystalline prints; increased flow rate; temperature resistance up to 60°C
	Light Weight PLA	Active foaming technology; reduced weight up to 50% of printed parts; low density
	PLA Tough	Tough like ABS, easy to print like PLA
	PLA Glitter	Unique glitter-gloss effect, reduced visibility of layers, not abrasive
	PLA MATT	Matte surface, UV stabilization, improved strength properties
	PLA Glow in the Dark	Strong phosphorescence effect, smooth surface after printing
	PLA Carbon	10% Carbon fiber reinforced, improved hardness & rigidity
	PLA Stone Age	Original, unique marble effect; layer masking, not abrasive
	PLA Thermoactive	Thermochromic effect, color changing ability at ca. 30°C
	PLA Nature	Bio-filler, unique texture, ease of printing, made of biodegradable raw materials
	WOOD	Natural wood content, perfect side surface of prints, wood appearance

Bio-performance

GreenyHT	High heat resistance, biodegradable, plasticizer-free, increased rigidity & hardness
GreenyPro	High impact resistance, excellent flexural strength, biodegradable, food safe, VICAT - 160°C

Recycled

rPLA	Created by reusing the recycled extrusion residual waste stream, lower environmental impact
rPETG	Created by reusing the recycled extrusion residual waste stream, lower environmental impact

Styrene-based

	Smart ABS	High quality ABS, reduced shrinkage, high impact resistance & rigidity, increased flow index
	ASA 275	Easy to print, excellent resistance to external exposure & weather conditions, high printing speed (up to 350mm/s)
new	FlameGuard ASA 275	Flame-retardant ASA; weather-resistant; UL94 VO; easy to print; suitable for high speed
	ASA-X CF10	10% Carbon fiber reinforced, improved thermal resistance, outdoor use in conditions of increased exposure to UV radiation & humidity
	ASA-X GF10	10% glass fiber, excellent resistance to outdoor exposure, UV resistance, perfect bonding of the layers
	HIPS-X	Light, fully soluble in D-Limonene, HDT B 88°C

Co(Polyester)

new	PET-G Premium High Speed	High-speed PET-G; prints up to 800mm/s; durable; ideal for strong, functional parts
	PET-G Premium	High quality PET-G, combines advantages of PLA $\&$ ABS, odour-free printing, chemical resistance
	PET-G Glitter	Unique glitter-gloss effect, reduced visibility of layers, not abrasive
	PET-G Carbon	10% Carbon fiber reinforced, improved hardness & rigidity
	PET-G Glow in the Dark	Strong phosphorescence effect, smooth surface after printing
	PET-G MATT	Matte surface, UV stabilization, improved strength properties
	PET-G Flame Retardant V0	Flame retardant, free of halogens, designed to meet UL 94 V0 standards
	PET-G/PTFE	10% PTFE reinforced, reduced coefficient of friction, tribological properties
	PCTG Premium	High quality PCTG, increased impact strength, combines features of Tough PLA and PET-G Premium
	PCTG CF10	10% Carbon fiber reinforced, high stiffness and tensile strength, good impact and chemical resistance
	PCTG GF10	10% Glass fiber reinforced, good corrosion and chemical resistance, high stiffness

Flexible

S-Flex 85A	Up to 650% elongation at break, Shore 85A, high tensile & tear resistance
S-Flex 90A	Up to 500% elongation at break, Shore 90A, oils & chemical resistance
S-Flex 98A	Up to 510% elongation at break, Shore 98A, high tensile & tear resistance
S-Flex Carbon	20% carbon fiber reinforced, fexibility and resilience, ESD properties, excellent chemical resistance

Polyamide

	PA6 Low Warp	Easy to print Nylon, good tribological properties, chemical resistance to lubricants & oils
	PA6 Low Warp CF15S	15% Carbon fiber reinforced, heat-stabilized, increased stiffness & tensile strength
	PA6 Low Warp GF30	30% Glass fiber reinforced, heat-stabilized, excellent chemical resistance
new	PA12 CF15	15% carbon fiber-filled PA12; lightweight; high strength; perfect for demanding industrial parts

Polycarbonate

PC 275 High impact strength & durability, excellent mechanical properties, reduced shrinkage effect

PC CF 10% carbon fiber-reinforced PC; excellent strength-to-weight ratio; high heat resistant & rigidity

Water soluble

AquaPrint Excellent cold water solubility, biodegradable once dissolved in water, safe dissolution in pure tap water

Industrial filaments

Polyamide

new	ThermaTech PA	Thermally conductive PA; boron nitride filler; electrical insulation; ideal for electronics	
	PA6 Neat NT	High temperature, unreinforced, chemical resistance to oils & lubricants, relatively high resistance to corrosion stimulators & good electrical insulation	LUVOCOM® LUVOCOM® 3F PA ^{HT} 9875 NT
	PA6 Neat BK	High temperature, mineral filler, good tribological properties, chemical resistance to oils & lubricants, good electrical insulation properties	LUVOCOM® LUVOCOM® 3F PA ^{HT} 9936 BK
	PA6 CF15	15% Carbon fiber reinforced, high Z-strength, high temperature resistance, reduced moisture & water absorption, exceptionally low linear shrinkage, increased mechanical strength	LUVOCOM® 3F PA ^{HT} CF 9742 BK
	PA6 GK10	10% Glass microspheres reinforced, stiffer & lighter than pure polyamide, low impact of moisture, high temperature resistance, good electrical insulation properties	LUVOCOM® 3F PA ^{HT} GK 9874 NT
	PA6 CS20 FR V0	Ceramic spheres, flame retardant, UL-94 V0 flammability achieved on ≥0.4 mm thick printed parts, halogen free, high mechanical strength	LUVOCOM® LUVOCOM® 3F PAHT KK 50056 BK FR

Co(Polyester)

PET-G HT100	Improved temperature resistance, excellent dimension stability & toughness, high mechanical strength, chemical resistance, low odour	
PET-G FX120	Flexible, Shore hardness 95A, excellent durability & temp. resistance, steam sterilisation possibility	
PET CF15	15% Carbon fiber reinforced, high Z-strength; high hardness, stiffness & creep resistance, excellent interlayer adhesion, chemical resistance to lubricants & oils	LUVOCOM 3F LUVOCOM® 3F PET CF 9780 BK

Styrene-based

ABS GP450	All-purpose, industrial grade, high mechanical strength & impact resistance, high printing speed (200mm/s), very robust interlayer adhesion
ABS Medical	Manufactured using ABS pellets that meet the biocompatibility requirements of USP Class VI or ISO 10993-1 certifications
ABS Kevlar	10% Aramid fiber reinforced, high rigidity & impact strength, excellent dimensional stability
ASA Kevlar	10% Aramid fiber reinforced, UV resistance, good aging resistance, excellent resistance to external exposure
PC/ABS FR V0	Flame-retardant UL-94 V0, halogen-free, excellent interlayer adhesion

Polypropylene

PP PP-copolymer unreinforced, outstanding chemical resistance, ultimate elongation - 500%; good temperature & electrical resistance	LUVOCOM® LUVOCOM® 3F PP 9929 NT
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Polycarbonate

PC/PTFE 10% PTFE reinforced, improved thermal stability, increased electrical insulation, high abrasion resistance

Polyphenylene sulfide

PPS AM230 High performance, excellent chemical resistance, high dielectric strength, exceptionally high mechanical properties

High performance (sintering)

Stainless steel Ceramics

316L Silicon Carbide Zirconia
Silicon Nitride Porcelain
Alumina











Desktop filaments comparison		Desktop filar	nents	con	npari	so	n			D	szzle od be			
Composition Fig. Composition Composi						h speed		Danaita		, box ommende	oy or dened no: ommende	Face		
Composition Fig. Composition Composi		Bio-based				. <u>S</u>	Cooling			rec	Rul		Toughness	Hardness
PLA Permium 185-275 0-45 40-300 -86 10 to 10 to 10 10 to 10 10 to	new					_	_	1.24	not necessary	No		10	_	9
		÷ '	185-215	0-45	40-350		·	1.24		No	No			9
		PLA Pro	185-230	0-45	40-350			1.22	_	No	No			9
Description Control	new	PLA Magic Silk	220-240	40-60	40-200	= ©	Up to 100%	1.22	not necessary	No	No	9	3	3
Pastello PLA	new	PLA SILK Rainbow	220-240	40-60	40-200	<u>=</u> 0	Up to 100%	1.22	not necessary	No	No	9	3	3
The FlameClaud PLA 19-230 0-50 0-1000 0-1000		PLA SILK	220-240	40-60	40-200	<u>=</u> ©	Up to 100%	1.22	not necessary	No	No	10	3	3
Muricand PLA 18-533 0.45 40-350 40-500 19-1000% 12-5		Pastello PLA	185-215	0-60	40-200	<u>=</u> 0	Up to 100%	1.30	not necessary	No	No	9	6	9
Hursdan PLA 18-230 0-45 4-0-350 0-50 0-10 0	new	PLA Metal	195-230	40-60	30-80		Up to 100%	1.22	not necessary	No	Yes	7	6	9
September Pick Pi	new	FlameGuard PLA	200-240	40-60	40-110		Up to 100%	1.26	not necessary	No	No	9	6	9
Description		Huracan PLA	185-230	0-45	40-350	<u>=</u> ©	Up to 100%	1.22	not necessary	No	No	9	6	9
PLA Tough 190 230 245 240 200 245 240 200 240 240 200 240 240 200 240 240 200 240	new	SafeGuard PLA	190-220	0-45	40-350	<u>=</u> 0	Up to 100%	1.24	not necessary	No	No	9	6	9
PLA Tough 190-230 0-45 40-200 28 Up to 100% 124 not necessary No No 10 6 9 9 9 1 1 1 1 1 1 1		PLA Crystal	185-215	0-45	40-250	<u>=</u> ©	Up to 100%	1.24	not necessary	No	No	9	6	9
PLA Ciliter PLA MATT PLA Carbon P		Light Weight PLA	200-280	0-45	30-100		Up to 100%	0.52-1.24	not necessary	No	No	8	6	8
PLA MATT 90-230 0-45 40-950 80 Up to 100% 124 not necessary No No 10 6 9 9 9 9 9 9 9 9 9		PLA Tough	190-230	0-45	40-200	<u>=</u> 0	Up to 100%	1.20	not necessary	No	No	10	5	7
PLA Carbon 190-220 0-45 40-250 60 Up to 100% 124 not necessary No No 10 10 10 10 10 10 10 1		PLA Glitter	185-215	0-45	40-200	<u>=</u> 0	Up to 100%	1.24	not necessary	No	No	10	6	9
PLA Carbon 190-220 0-45 40-200 0-100 0-120 0-124 not necessary No No No No No No No N		PLA MATT	190-230	0-45	40-450	<u>=</u> 0	Up to 100%	1.24	not necessary	No	No	10	5	9
PLA Stone Age PLA Thermoactive 190 220 0.45 40-250 a Up to 100% 124 not necessary No No No 10 6 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9		PLA Glow in the Dark	185-225	0-45	40-250	<u>=</u> 0	Up to 100%	1.24	not necessary	No	No	10	6	9
PLA Thermoactive 190-220 0-45 40-250 © Up to 100% 124 not necessary No No 10 0 6 9 9 1 1		PLA Carbon	190-220	0-45	40-200		Up to 100%	1.30	not necessary	No	Yes	9	4	3
PLA Nature		PLA Stone Age	185-225	0-45	40-250	<u>=</u> 0	Up to 100%	1.24	not necessary	No	No	10	6	9
Bio-perfomance 190-220		PLA Thermoactive	190-220	0-45	40-250	= 0	Up to 100%	1.24	not necessary	No	No	10	6	9
Bio-performance 190-220		PLA Nature	185-215	0-45	40-250	= 0	Up to 100%	1.25	not necessary	No	No	9	6	9
GreenyHT		WOOD	190-220	0-45	20-80		Up to 100%	1.15	not necessary	No	No	8	5	9
GreenyPro 190-220		Bio-perfomance												
Recycled FPLA 190-215 40-50 40-200 20 Up to 100% 124 not necessary No No No No No No No N		GreenyHT	190-220	0-45	40-800	<u>=</u> 0	Up to 100%	1.54	not necessary	No	No	10	5	8
rPLA rPETG Z30-255 60-80 40-150 75-100% 123 not necessary No No No No No No No No No N		GreenyPro	190-220	0-45	40-150		Up to 100%	1.34	not necessary	No	No	7	6	8
Styrene-based 230-255 60-80 40-150 75-100% 123 not necessary No No 8 5 8 Styrene-based Smart ABS 230-260 100 40-200 =0 0-25% 1.05 recommended for long prints No No 7 6 1 7 rew FlameGuard ASA 275 220-260 40-70 40-300 =0 0-20% 1.06 no No No 5 6 7 ASA-X CFI0 235-260 90-110 30-150 0-20% 1.10 not necessary No No 5 6 7 1 ASA-X GFI0 240-270 80-100 30-150 0-20% 1.11 not necessary No Yes 6 6 6 7 1 Flee-G Premium Higs-S 230-255 60-80 40-350 =0 75-100% 1.27 not necessary No No 6 1 7 1 1 1 <th< td=""><td></td><td>Recycled —</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></th<>		Recycled —												
Styrene-based Smart ABS 230-260 100 40-200 60 0-25% 1.05		rPLA	190-215	40-50	40-200	<u>=</u> 0	Up to 100%	1.24	not necessary	No	No	10	5	8
Smart ABS		rPETG	230-255	60-80	40-150		75-100%	1.23	not necessary	No	No	8	5	8
ASA 275 210-260 60-80 40-350 40-350		Styrene-based —												
FlameGuard ASA 275 220-260 40-70 40-300 20 0-20% 1.08 1.		Smart ABS	230-260	100	40-200	= 0	0-25%	1.05		No	No	7	6	9
ASA-X CF10		ASA 275	210-260	60-80	40-350	_	0-20%	1.07		No	No	9	6	7
ASA-X GFIO HIPS-X 230-245 80-100 40-200 0-20% 1.05 recommended for larger prints No No Ro Recommended for larger prints Recomm	new	FlameGuard ASA 275	220-260	40-70	40-300	<u>=</u> @	0-20%	1.08	recommended for larger prints	No	No	5	6	7
HIPS-X Co(Polyester) Co(Polyester) DET-G Premium High Speed 230-255** 60-80 40-800 PET-G Premium 230-255 60-80 40-350 PET-G Gremium 230-255 60-80 40-200 PET-G Glitter 230-255 60-80 40-200 PET-G Glow in the Dark 230-255 60-80 40-200 PET-G Glow in the Dark 230-255 60-80 30-70 PET-G FR V0 230-255 60-80 30-70 PET-G/PTFE 230-255 60-80 30-150 PET-G/PTFE 250-270 >50 30-150 PCTG GFI0 250-270 >50 30-150 PCTG GFI0 250-270 >50 30-150 PCTG GFI0 250-270 >50 30-150 PCTG SPIA SAA 200-230 50-70 15-70 PCTG SPIA SAA 200-230 50-70 15-70 POlyamide PA6 Low Warp CFISS 250-280 85-100 30-150 PA6 Low Warp CFISO 250-280 850 30-150 PA6 Low Warp CFISO 250-280 85-100 30-150 PA6 Low Warp CFISO 250-280 85-100 30-150 PA6 Low Warp CFISO 250-280 85-100 30-150 PA6 Low Warp CFISO 250-280 850 30-150 PA6 Low Warp CFISO 250-280 850 30-150 PA6 Low Warp CFISO 250-280 880 30-150 PA6 Low Warp CFISO 250-280 850 30-150 PA6 Low Warp CFISO 250-280 880 30-150			235-260	90-110	30-150		0-20%	1.10	not necessary	No	Yes	6	6	9
Co(Polyester) PET-G Premium High Speed 230-255** 60-80 40-800 s 75-100% 1.29 not necessary No No 7						_								-
PET-G Premium High Speed 230-255			230-245	80-100	40-200	<u>=</u> @	0-20%	1.05	larger prints	No	No	6	3	4
PET-G Premium 230-255 60-80 40-350 PET-G Glitter 230-255 60-80 40-200 PET-G Carbon 230-255 60-80 230-255 60-80 230-255 60-80 230-255 60-80 PET-G Clow in the Dark 230-255 60-80 PET-G MATT 230-255 60-80 30-70 PET-G FR V0 PET-G FR V0 PET-G Premium 240-270 PET-G Premium 240-270 PCTG GFI0														
PET-G Clitter 230-255 60-80 40-200	new													-
PET-G Carbon 230-255 60-80 30-120 75-100% 1.32 not necessary No Ves 7 5 5 8 8									_					
PET-G Glow in the Dark 230-255 60-80 40-200						<u>=</u> (0)								
PET-G MATT									-					
PET-G FR V0 230-255 60-80 30-70 75-100% 1.26 not necessary No No 6 5 8 8						<u>=</u> (0)			,					
PET-G/PTFE 230-255 60-80 30-150 75-100% 1.32 not necessary No No 6 5 8 8 7 9 9 75-100% PCTG Premium 240-270 60-80 40-350 © 75-100% 1.27 not necessary No No 8 8 7 9 9 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1									_					
PCTG Premium 240-270 60-80 40-350														
PCTG CF10									-					
PCTG GFI0						<u>=</u> 0								
Flexible S-Flex 85A 200-230 50-70 15-50 Up to 100% 1.11 not necessary No No 5 4 1 S-Flex 90A 200-230 50-70 15-70 Up to 100% 1.22 not necessary No No 6 3 1 1 S-Flex 98A 200-230 50-70 20-100 Up to 100% 1.09 not necessary No No 7 5 5 5 S-Flex Carbon 210-245 45-70 45-70 Up to 100% 1.23 not necessary Yes Yes 6 5 5 POlyamide PA6 Low Warp 250-280 85-100 30-150 0-30% 1.15 recommended for larger prints Yes Y									_					
S-Flex 85A 200-230 50-70 15-50 Up to 100% 1.11 not necessary No No 5 4 1 1 S-Flex 90A 200-230 50-70 15-70 Up to 100% 1.22 not necessary No No 6 3 1 1 S-Flex 98A 200-230 50-70 20-100 Up to 100% 1.09 not necessary No No 7 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5			250-270	>50	30-150		50-85%	1.31	not necessary	No	Yes	7	5	10
S-Flex 90A 200-230 50-70 15-70 Up to 100% 1.22 not necessary No No 6 3 1 1 1 S-Flex 98A 200-230 50-70 20-100 Up to 100% 1.09 not necessary No No 7 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5			200 270	E0 70	15 50		lin to 1000/	1 11	not naga	NI	NIa			7
S-Flex 98A 200-230 50-70 20-100 Up to 100% 1.09 not necessary No No 7 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5														
S-Flex Carbon 210-245 45-70 45-70 Up to 100% 1.23 not necessary Yes Yes 6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5									_					
Polyamide PA6 Low Warp 250-280 85-100 30-150 0-30% 1.15 recommended recommended for larger prints Yes No 4 4 5 PA6 Low Warp CF1SS 250-280 <80														
PA6 Low Warp			210-245	45-70	45-70		up to 100%	1.23	not necessary	yes	yes	6	5	5
PA6 Low Warp CF15S 250-280 <80 30-150 0-30% 1.28 recommended for larger prints Yes Yes 5 7 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9		•	250, 200	OF 100	70 150		0.700/	115	rocommondad	\/	NIa			_
PA6 Low Warp GF30 250-280 <80 30-150 0-30% 1.34 recommended for larger prints Yes Yes 5 6 9		·												
		·												
233-250 200 30-130 0-1070 1.07 larger prints YeS YeS 4 9 9 9 9 9 9 9 9 9	(POW)	·												
	(lew)	FAIZ GI IJ	233-230	700	20-120		0-1070	1.07	larger prints	165	162	4	5	

^{* 225-250°}C for high speed

^{** 245-270°}C for high speed

Impact resistance	Ultimate tensile strenght	Elongation at break	Heat resistance		Surface finish	Adhesive
4	6	3	2	HDT - 60°C	shiny	not necessary*
3	6		2	HDT - 55°C	shiny	not necessary*
6	5	6	4	HDT - 85°C**	shiny	not necessary*
3	4		2	HDT - 50°C	glossy, silky	not necessary*
3	4	1	2	HDT - 50°C	glossy, silky	not necessary*
3	4	1	2	HDT - 50°C	glossy, silky	not necessary*
3	6	3	2	HDT - 59°C	semi-matte	not necessary*
3	5	3	2	HDT - 55°C	matte, rough	not necessary*
7		4	3		semi-matte	
				HDT (crystalline) - 90°C		not necessary*
6	5	4	4	HDT - 85°C**	shiny	not necessary*
3 🔣	6	3	2	HDT - 55°C	shiny	not necessary*
3	6		2	HDT - 60°C	shiny, semi-transparent	not necessary*
3	5	3 🔠	2	HDT - 55°C	matte, rough	not necessary*
3 🔠	4	6	2	HDT - 55°C	semi-matte	not necessary*
3	6	5	2	HDT - 55°C	shiny	not necessary
2	4	3 🔣	4	HDT B - 116°C**, VICAT - 85°C**	matte	not necessary
3	6	5	2	HDT - 55°C	semi-matte	not necessary
3	6	1	2 📗	VICAT - 60°C	matte, carbon appearance	not necessary
3 🔣	6	5	2	HDT - 55°C	satin, stone appearance	not necessary
3	6	5	2	HDT - 55°C	shiny	not necessary*
3	6	3	2	HDT - 60°C	shiny	not necessary
1	5		2	HDT - 55°C	matte, rough, wood appearance	not necessary*
	-					
1	6	4	4	HDT B - 87°C, VICAT - 98°C	matte, rough	not necessary*
3	6	3	5	VICAT - 160°C	semi-matte	not necessary*
2	5	5	2	HDT - 55°C	shiny	not necessary*
5	5	4	3	HDT B - 70°C	shiny	not necessary*
7	5	7	4	HDT A - 85°C, VICAT - 93°C	shiny	not necessary*
7	5	9	4	HDT A - 86°C, VICAT - 94°C	shiny / semi-matte	not necessary
7	5	10	4	HDT A - 86°C, VICAT - 94°C	shiny / semi-matte	not necessary
3	7	5	5	HDT A - 95°C, VICAT - 101.6°C	matte, carbon appearance	not necessary
3	6		4	HDT - 100°C	semi-matte	not necessary
4	1	2	4	HDT A - 73°C, VICAT - 96°C	matte	not necessary
5	5	9	3 📗	HDT B - 78°C	shiny	not necessary
5	5		3	HDT B - 78°C	shiny	not necessary
5	5		3	HDT B - 78°C	shiny	not necessary
					·	-
3	5		3	HDT B - 72°C, VICAT - 80°C	matte, carbon appearance	not necessary
5	5		3	HDT B - 78°C	shiny	not necessary
6	5		4	HDT B - 80°C, VICAT - 85°C	matte	not necessary
2	5		3	HDT B - 63°C, VICAT - 70°C	opaque	not necessary
2	5		3	VICAT - 70°C	semi-matte	not necessary
6	6		3 📗	HDT B - 76°C	shiny	not necessary
2	6		3	HDT B - 78°C, VICAT - 89°C	matte, carbon appearance	not necessary
2	6	6	3	HDT B - 78°C, VICAT - 89°C	semi-matte	not necessary
3	5	10	4	HDT B - 72°C	shiny	not necessary
2	5	10	4	HDT B - 74°C	shiny	not necessary
3 🔠	6	10	4	HDT B - 75°C	shiny	not necessary
5	6	10	6	HDT A - 134°C	matte, carbon appearance	not necessary
3 🔠	5	2	2	HDT B - 60°C	shiny	not necessary (
2	10		9	HDT B - 180°C	matte, carbon appearance	not necessary (
2	7		9	HDT B - 180°C	semi-matte, rough	not necessary (
Z						

^{**} annealed

Adhesives: * For increased adhesion or to prevent warping: glue stick, Dimafix, 3DLac, Magigoo (1) - Magigoo PA (2) - Magigoo PC

	Desktop filaments comparison														
new	Polycarbonate PC 275 PC CF Water soluble AquaPrint		Nozzle temp. [°C] 270-330 270-330	Bed temp. [°C] 90-130 >80	Printing speed [mm/s] 30-250 30-120	High speed	Cooling 0-20% 0-20%	Density [g/cm³] 1.20 1.20	Closed chamber for printing recommended for larger prints recommended for larger prints	pepula xoq Azq Yes Yes	S Ruby or S hardened nozzle recommended	Ease of print 6	Toughness 5	Hardness 5	
	Industr	ial fil	amer	nts c	ompa	ris	on								
	Polyamide														
new	ThermaTech PA		250-280	>80	30-150		0-10%	1.30	recommended for larger prints	Yes	No	5	7	8	
	PA6 Neat NT	LUVOCOM'3F	250-280	60-90	30-150		0-10%	1.14	recommended for larger prints	Yes	No	5	7	8	
	PA6 Neat BK	LUVOCOM'3F	250-280	60-90	30-150		0-10%	1.25	recommended for larger prints	Yes	No	5	7	8	
	PA6 CF15	LUVOCOM'3F	260-290	70-100	30-120		0-10%	1.25	not necessary	Yes	Yes	4	9	9	
	PA6 GK10	LUVOCOM'3F	260-290	70-100	30-120		0-10%	1.01	recommended for larger prints	Yes	Yes	3	6	8	
	PA6 CS20 FR V0	LUVOCOM 3F	260-290	70-100	30-120		0-10%	1.49	not necessary	Yes	Yes	4	7	8	
	Co(Polyester)														
	PET-G HT100		250-280	100-110	30-150		0-30%	1.18	recommended for larger prints	No	No	6	7	9	
	PET-G FX120		240-260	60-80	30-100		30-70%	1.13	recommended	Yes	No	4	5	3	
	PET CF15	LUVOCOM 3F	245-270	50-70	30-200		0-30%	1.40	not necessary	No	Yes	7	7	9	
	Styrene-based														
	ABS GP450		240-270	100	30-350	<u>=</u> ©	0-25%	1.04	recommended for larger prints	No	No	7	6	9	
	ABS Medical		240-270	100	30-200		0-25%	1.06	recommended for larger prints	No	No	7	7	8	
	ABS Kevlar		250-270	100	30-150		0-25%	1.05	recommended for larger prints	No	Yes	6	6	9	
	ASA Kevlar		240-270	80-100	30-150		0-25%	1.07	recommended for	No	Yes	6	6	9	
	PC/ABS FR V0		240-265	90-110	40-300	<u>=</u> ©	0-25%	1.17	recommended for larger prints	No	No	5	6	8	
	Polypropylene								<u> </u>						
	PP	LUVOCOM'3F	265-295	95-120	30-80		0-35%	0.89	recommended	No	No	2	4	5	
	Polycarbonate														
	PC/PTFE		265-295	90-120	30-80		0-10%	1.32	recommended	No	No	2	7	8	
	Polyphenylene	sulfide													
	PPS AM230		300-330	90-120	30-150		0-10%	1.33	active heated (60-80°C)	Yes	No	3	7	9	
									(00 00 0)						

LUVOCOM® 3F filaments quality was entirely checked and is certified by Lehmann&Voss Co. KG. For LUVOCOM® 3F materials name references see page 21.

High performance filaments comparison

	Nozzle temp. [°C]	Bed temp. [°C]	Printing speed [mm/s]	Cooling	Green density [g/cm³]	Ruby or hardened nozzle recommended	Recommended nozzle diameter	Shrinkage (X/Y)	Shrinkage (Z)
316L	155-170	60-70	10-30	Off	7.36	Yes	0.4 - 0.8 mm	16.48%	16.27%
Silicon Carbide	155-170	60-70	10-30	Off	2.161	Yes	0.4 - 0.8 mm	16.40%	21.20%
Silicon Nitride	155-170	60-70	10-30	Off	2.200	Yes	0.4 - 0.8 mm	18.36%	20.36%
Alumina	155-170	60-70	10-30	Off	2.533	Yes	0.4 - 0.8 mm	19.00%	21.50%
Zirconia	155-170	60-70	10-30	Off	3.441	Yes	0.4 - 0.8 mm	20.30%	20.30%

Impact resistance 6 6 6	Ultimate tensile strenght	Elongation at break 10	Heat resistance	HDT B - 139°C; VICAT - 150°C HDT B - 139°C; VICAT - 150°C	Surface finish shiny matte, carbon appearance matte	Adhesive not necessary (2) not necessary (2) not necessary*
			,		semi-matte	
7	7	4	4			recommended (1)
7	7	4	5	HDT A - 90°C, continous service temp. (20.000h) - 120°C, service temp. (200h) - 160°C	semi-matte	recommended (1)
6	7	4	5	HDT A - 200°C, continous service temp. (20.000h) - 150°C,	semi-matte	recommended (1)
5	10	4	10	service temp. (200h) - 180°C	matte, carbon appearance	recommended (1)
4	8	4	5	HDT A - 90°C, continous service temp. (20.000h) - 120°C, service temp. (200h) - 160°C	opaque	recommended (1)
5	6	2	5	service temp, (2001) 100 0	matte, rough	recommended (1)
9	5	5	5	HDT B - 94°C	shiny	not necessary*
3	4	10	9	VICAT - 170°C	shiny	recommended (2)
5	7	4	6	Service temp. (200h) - 125°C	matte, carbon appearance	not necessary*
7	5	7	4	VICAT - 95°C	shiny	not necessary*
7	5	8	4	VICAT - 97°C	shiny	not necessary*
4	5	5	4	HDT B - 88°C, VICAT - 95°C	matte, rough	not necessary*
4	5	5	4	HDT B - 89°C, VICAT - 94°C	matte, rough	not necessary*
6	6	4	5	VICAT - 104°C	shiny	not necessary*
6	3	10	6	HDT B - 80°C, VICAT - 135°C	semi-matte	necessary (3)
5	6	6	7	HDT B - 140°C, VICAT - 145°C	semi-matte	necessary (4)
4	6	3	10	HDT B - 129°C, VICAT - 236°C	shiny	necessary (5)

Adhesives: * For increased adhesion or to prevent warping: glue stick, Dimafix, 3DLac, Magigoo
(1) - Magigoo PA; (2) - glue stick / Dimafix / 3DLac / Magigoop; (3) - MagigooPP; (4) - MagigooPC; (5) - Magigoo Pro HT

Scaling factor (X/Y)	Scaling factor (Z)	Sintering conditions
1.20	1.19	> 1.000°C
1.196	1.269	2.100 – 2.200°C in argon
1.225	1.256	1.680-1.750°C in nitrogen at elevated pressue
1.235	1.274	1.475 – 1.640°C in air
1.255	1.255	1.450 – 1.500°C in air







The Filament new

- Value for money
- Practical & functional
- European production
- Competitive pricing
- Available as spool & refill version



THE FILAMENT is our new brand of filaments designed for 3D printing users who prioritize practicality and functionality. The "no frills" series is intended for both beginner 3D printing enthusiasts and experienced professionals who expect reliability, precision and quality. THE FILAMENT combines features that satisfy the most demanding users - print stability, excellent bed adhesion and a uniform structure that results in precise detail reproduction in every project.

Each filament in THE FILAMENT series undergoes rigorous quality testing, ensuring color consistency, excellent usability and dimensional stability. Whether you're creating prototypes, concept models, or functional parts, rest assured that this product will deliver consistent and high print quality. These filaments are highly compatible with a wide range of 3D printers, making them ideal for both home and industrial projects.

At the launch, THE FILAMENT by Spectrum includes 5 basic materials:

- Classic PLA & PET-G in carefully selected palette of the most popular colors,
- PLA HS high speed PLA, printable up to 600 mm/s,
- PLA CF & PET-G CF Carbon Fiber reinforced, precoloured, perfect for realizing all your creative ideas.

Soon, the portfolio will include more advanced composite materials, ideal for projects requiring specific properties such as mechanical strength or high-temperature resistance. With a thoughtful selection of materials, every user will find the right filament to suit their needs.

Spools

COMPATIBILITY Bambu Lab AMS System





PLA CF



New additions to The Filament portfolio!

PET-G



















Snow White Sorbet Yellow

Machinery Orange

Technical Red

Strawberry Pink

Plasma

Performance Purple Blue

Circuit Green

Aluminium









Transparent

Red



Transparent

Blue

PET-G CF

Cloud Grey



Red



Purple

Basalt Grey



Blue



Green





Black

ReFills

COMPATIBILITY

Bambu Lab reusable spools

PLA



















Traffic White

Wood Ash

Sorbet Yellow

Machinery Orange









Black

Performance Blue







Purple



Circuit Green Bison Brown

Cloud Grey

Silver Aluminium

Basalt Grey

Midnight

Sky Blue

PLA HS



Grid Beige

Mirage Grey









Purple



Winter Blue



Energy Green Moss Green



Traffic White









Midnight Black

PLA CF

Moss Grey



Red





Purple





Green



Grey



Black

PET-G





Violet



Orange





Strawberry

Pink



Purple



Blue



Circuit

Green





Aluminium





Basalt Grey





Transparent

Red



Blue

COMING SOON

New additions to The Filament portfolio!

PET-G CF

Cloud Grey







Midnight Black







Prografen new

Prografen - Graphene reinforced

Acquired by Spectrum in February 2024, Prografen is a brand of 3D printing filaments enhanced with graphene, designed primarily for high-speed printing while delivering superior strength and flexibility.



Prografen filament range includes:



PLA Graphene Light

Featuring 0.5% graphene, offers improved strength and flexibility while maintaining the ease of use and eco-friendliness of standard PLA.



PLA Graphene Strong

5% graphene, designed for ultra high-speed printing (up to 1000 mm/s) and excels in projects requiring exceptional strength and precision.



PET-G Graphene Light

0.5% graphene, combines ease of printing with improved mechanical performance.



PET-G Graphene Strong

5% graphene-reinforced PET-G filament designed for demanding technical applications requiring enhanced mechanical strength and durability.

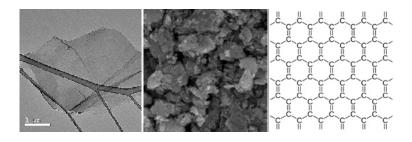
Looking ahead, we will further expand Prografen portfolio with the introduction of ASA Graphene and PA Graphene, offering even more advanced materials for industrial and engineering purposes.

What is graphene?

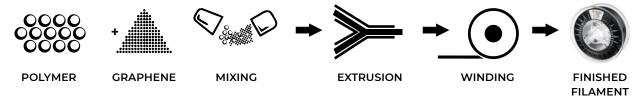
Flake graphene in powder form are very fine particles of monolayer carbon structure, which can be used to creat nanomaterials with unique properties. Flake graphene is formed by separating layers of graphite into single carbon flakes.

On the right:

Microscopic images of flakes and the structural pattern of a single graphene layer.



How is Prografen made?



When to use Prografen filament?

- → For parts exposed to environmental conditions
- → When you care about time & speed of print
- → If you care about mechanical properties
- → If you care about how the printout presents
- → If your print will contain moving parts
- → If you want great properties for good price
- → If you want to print with standard nozzle
- → If you care about the quality of the printout

Key features of Prografen filaments



Dimensional stability

Adding graphene into the polymer matrix improves the dimensional stability of the printout by reducing shrinkage. It makes the printout retain the desired shape.



High mechanical strength

The addition of graphene results in 25% higher tensile strength of the material and a 20% increase in stiffness compared to pure PET-G



Fast printing

The addition of graphene increases the melt flow rate of polymers, which means that graphene-filled filament can be printed faster than standard polymers*.



Non-abrasive

The ability to extrude using standard nozzles without the risk of excessive wear in contrast to carbon fiber materials



Resistance to UV radiation



Thermal conductivity



Deep black color



Barrier properties for gases & liquids

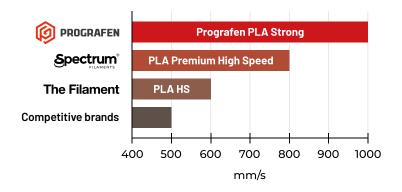
PLA Graphene Strong

Print with speeds up to 1000 mm/s

Prografen PLA Graphene Strong can be printed at ultra-high speeds exceeding 1000 mm/s, which is unattainable for other materials currently available on the market. Prografen PLA Graphene Strong excels in projects requiring high-quality finishes, strength and precision, such as functional prototypes or spare parts. With the addition of graphene, the filament is resistant to abrasion, strong and lightweight, making it an ideal choice for technical and industrial applications.

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PLA Filament printing speed comparison







Prografen Strong is the fastest printing PLA filament as compared to other brands.

^{*} If you don't need fast printing, you can lower the extrusion temperature (relative to the same material without graphene), thus saving energy.

Private label (OEM) filaments

Private Label + Custom OEM gives you opportunity to create your own product line based only on your brand and material strategy, without the capital investment of expensive technological infrastructure. Deep knowledge of market trends, chemistry, sourcing and experience allows us to provide high quality filaments at compelling prices.

As a part of our Private Label Services, we aid our clients at every stage of product development through the selection of a polymer type, graphic design, type of packaging and technical support. The final product will be designed according to requirements. We provide flexible production MOO and MOA to support the development of new product lines and material types.

With Spectrum Group Sp. z o.o., the possibilities for private labeling are comprehensive and flexible. Creating new or custom colors, developing non-standard diameter or providing custom spools are all available across the range of our filaments. We can rapidly adjust production to the specified range and weight.

We look forward to being your preferred partner in Private Label and Custom OEM development for high-quality prototype and industrial 3D printing filaments.

Private brand benefits

- Margin improvement on highvolume / established materials
- Extend on general brand strategy for market positioning & differentiation
- ✓ Data capture
- ✓ Customer loyalty

Follow the steps:





Available materials

Desktop

- · PLA
- · PLA Premium High Speed
- · PLA Premium
- · PLA Pro
- PLA Magic SILK
- PLA SILK Rainbow
- · PLA SILK
- · Pastello PLA
- PLA Metal
- FlameGuard PLA
- · Huracan PLA
- SafeGuard PLA
- · PLA Crystal
- PLA Light Weight
- PLA Tough
- PLA Glitter
- PLA MATT

- PLA Carbon
- · PLA Stone
- · PLA Nature
- · WOOD
- · rPLA
- · rPETG
- · ASA
- ASA Carbon
- · ASA Glass Fiber
- ASA Kevlar
- · HIPS
- ABS
- ABS Kevlar
- · PET-G
- PET-G MATT
- · PET-G Carbon
- PET-G High Speed

- · PCTG
- · PCTG Carbon
- PCTG Glass Fiber
- PA6 Low Warp
- PA6 Low Warp Carbon
- PA6 Low Warp Glass
- PA12 CF15
- · S-Flex 85A
- · S-Flex 90A
- · S-Flex 98A
- · TPU
- TPC 30D
- · TPC 40D
- PC 275
- · PC CF

Industrial

- PA6 Neat NT
- · PA6 Neat BK
- PA6 GK10
- PA6 CF10
- PET-G HT100
- PET-G FX120
- · PET CF15
- ABS GP450
- · ABS Medical
- · PP
- · PC/ABS

Available spools



ABS PC ECO
(black) (transparent) (cardboard)

Net filament weight:

- · 0.25 kg
- 0.50 kg
- · 0.75 kg
- 1 kg
- 2 kg
- 2.3 kg
- 2.5 kg
- 2.5 kg
- · 4.5 kg
- 5 kg
- 8 kg
- 10 kg12.5 kg
- 20 kg

- 0.25 kg
- 0.50 kg
- 0.75 kg
- 1 kg
- 2 kg
- 2.3 kg2.5 kg2.5 kg
 - 2.5 kg3.5 kg
 - 4.5 kg

Available spool packaging options

- · Shrink film
- Vacuum bag
- · Vacuum bag with ZIP lock
- · Aluminium bag with ZIP lock

Available spool & box labeling options

- · Different label sizes & design
- · Single of full color print

Available spool & box labeling options

- · Standard white/grey box with/without window
- According to customer's request possibility of visual identification on the box (fully individual box design)

Available diameters

- · 1.75 mm
- · 2.85 mm





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