

PrintaMent PLA

DATASHEET

Description

PrintaMent PLA is a tough, easy to use high grade type of filament ideal from low to high priced 3D printers. Our special modified formula, retains the typical features of PLA, but makes it tougher and less brittle. Due to a low shrinkage factor PLA will not deform after cooling.

Features

- Tougher and less brittle compared to regular PLA
- Easy to print at low temperature
- Low warping
- Biodegradable
- Limited smell

Colors

Natural - Black - White - Cream White - Pearl White - Yellow - Mango Yellow - Orange - Red - Gleaming Pink - Magenta - Purple - Blue - Dark Blue - Lime Green - Leaf Green - Petrol Green - Brown - Light Grey - Iron Grey - Bronze - Silver - Gold - Flash Yellow - Flash Orange - Acid Green - Crystal - Glow in the Dark

Additional Info

Due to its low tendency to warp PLA can also be printed without a heated bed. If you have a heated bed the recommended temperature is +/- 35-60°C PLA can be used on all common desktop FDM and FFF technology 3D printers. Storage: Cool and dry (15-25°C) and away from UV light

Technical Data

Dimensions

Size	Tolerance	Roundness
Ø1,75mm	±0,05mm	>95%
Ø2,85mm	±0,10mm	>95%

Physical Properties

Description	Typical Value
Specific gravity	1,24g/cc
MFI	6g/10min
Tensile strength	110MPa (MD) 145MPa (TD)
Elongation at break	160% (MD) 100% (TD)
Tensile modulus	3310MPa (MD) 3860MPa (TD)
Impact strength	7,5kJ/m ²

Thermal Properties

Size	Roundness
Printing temp.	180-210°C
Melting temp.	210°±10°CC
Melting point	145-160°C
Vacant softening t	±60°C

PrintaMent PET-G CF20

DATASHEET

Description

PET-G CF20 is a 20% carbon fiber reinforced PET-G based filament. The result is a twice as stiff filament as PET-G with increased impact and heat resistance (HDT) to 80 °C. This, together with other features, such as a matt surface, no warp, dimensionally stable and extremely forgiving to print, makes this filament suitable for a very wide variety of applications besides the typically mentioned RC parts, drones, automotive and more.

Features

- 20% Carbon fiber reinforced PET-G
- Extremely stiff
- Increased impact and heat resistance
- No warping and dimensionally stable
- Matt surface
- Abrasive (see additional info)

Colors

Natural Dark Grey

Additional Info

For a heated bed the recommended temperature is $\pm 35-60$ °C. Please consider the use of a hardened steel nozzle when printing with PET-G C20. The carbon fibers are abrasive and will result in fast wear of regular brass nozzles. PET-G C20 can be used on all common desktop FDM or FFF technology 3D printers. Storage: Cool and dry (15-25 °C) and away from UV light. This enhances the shelf life significantly.

Technical Data

Dimensions

Size	Tolerance	Roundness
Ø1,75mm	±0,05mm	>95%
Ø2,85mm	±0,10mm	>95%

Physical Properties

Description	Typical Value
Specific gravity	1,19g/cc
E-modulus 1mm/min	3800 MPa
Yield stress 50mm/min	52,5 MPa
Yield strain 50mm/min	4,2%
Strain at break 50mm/min	8,0%
Impact Strength Izod Notched 23 °C	3,8kJ/m ²

Thermal Properties

Size	Roundness
Printing temp.	225-245°C
Heat distortion temp.	80°C

PrintaMent SEMIFLEX

DATASHEET

Description

SEMIFLEX is a crystal clear, strong, flexible and easy to print filament for 3D printing. These characteristics, together with the high degree of gloss, very low water absorption, practically no shrinkage or warping, very good interlayer adhesion and flame retardant properties make it a very special filament. The material is FCA (Food Contact Acceptable) approved. In short, a very diverse filament which can be used for many applications.

Features

- 92% light transmission, so very bright
- Strong and flexible
- Very good interlayer adhesion
- No crazing when bent
- Food Contact Acceptable

Colors

transparent

Additional Info

Recommended temperature for heated bed is $\pm 70-90^{\circ}\text{C}$. Adhesion is possible on different surfaces. SEMIFLEX can be used on all common desktop FDM or FFF technology 3D printers. Storage: Cool and dry ($15-25^{\circ}\text{C}$) and away from UV light. This enhances the shelf life significantly.

Technical Data

Dimensions

Size	Tolerance	Roundness
$\varnothing 1,75\text{mm}$	$\pm 0,05\text{mm}$	>95%
$\varnothing 2,85\text{mm}$	$\pm 0,10\text{mm}$	>95%

Physical Properties

Description	Typical Value
Specific gravity	1,01g/cc
MFR 200 °C/5kg	7,5 g/10 min
Tensile strength	26,2 Mpa
Elongation at break	230%
Flexural modulus	1795 Mpa
Instr. Dart Impact (23 °C, 3,18mm TE)	40,0 J
Shore D Hardness	63
Light Transmission	92%

Thermal Properties

Size	Roundness
Printing temp.	235-250 °C
Melting temp.	177-232 °C
vicat softening temp.	$\pm 85^{\circ}\text{C}$

PrintaMent HIPS

DATASHEET

Description

HIPS is an easy to print, High Impact Polystyrene filament with multifunctional properties. HIPS is an excellent support material in combination with ABS, because it dissolves in D'limonene and ABS remains unaffected. HIPS is very suitable for detailed prints, but also for large objects because the material shows very limited warping. Furthermore HIPS is very light and durable, has good interlayer bonding, can be glued easily and the colours result in a smooth matt surface of the 3D printed objects. High Impact Polystyrene is therefore widely used in model building.

Features

- High impact-resistance
- Can be glued easily
- For matt, detailed, complex or large prints
- Light and durable
- Low warping

Colors

white

Additional Info

Recommended temperature for heated bed is $\pm 65-110^{\circ}\text{C}$. HIPS can be used on all common desktop FDM or FFF technology 3D printers. Storage: Cool and dry ($15-25^{\circ}\text{C}$)

and away from UV light. This enhances the shelf life significantly.

Technical Data

Dimensions

Size	Tolerance	Roundness
$\varnothing 1,75\text{mm}$	$\pm 0,05\text{mm}$	>95%
$\varnothing 2,85\text{mm}$	$\pm 0,10\text{mm}$	>95%

Physical Properties

Description	Typical Value
Specific gravity	1,04 g/cc
MFR 200 $^{\circ}\text{C}/5\text{kg}$	3,4cm/310min
Tensile stress	22 Mpa
Elong. at break (MD)	50%
Tensile modulus	1550 Mpa
Impact strength Izod method 23 $^{\circ}\text{C}$	15 KJ/m ²

Thermal Properties

Size	Roundness
Printing temp.	220-270 $^{\circ}\text{C}$
Melting temp.	220 $^{\circ}\text{C} \pm 40^{\circ}\text{C}$
vicat softening temp.	$\pm 89^{\circ}\text{C}$

PrintaMent M-ABS

DATASHEET

Description

M-ABS is a transparent ABS filament, so strong, durable and impact resistant. Due to the low percentage of butadiene in M-ABS this filament smells much less unpleasant than ABS, and, moreover, also shows less warping. The M-ABS polymer is inherently less impact resistant than ABS, but slightly modified our M-ABS filament is still approx. 3 times more impact resistant than any regular PLA in the market. The transparency of the polymer makes it also possible to manufacture deep opaque colours, if desired.

Features

- Transparent, translucent
- Not the unpleasant smell of ABS
- High impact M-ABS
- Good chemical resistance
- Less warping than ABS

Colors

Clear – Black – White – Red- Blue - Lime Green – Gold - Yellow Transparent - Red Transparent - Green Transparent - Blue Transparent - Glow in the Dark

Additional Info

Recommended temperature for heated bed is $\pm 90-100^{\circ}\text{C}$. M-ABS can be used on all common desktop FDM technology or FFF 3D printers. Storage: Cool and dry ($15-25^{\circ}\text{C}$) and away from UV light. This enhances the shelf life significantly.

Technical Data

Dimensions

Size	Tolerance	Roundness
$\varnothing 1,75\text{mm}$	$\pm 0,05\text{mm}$	>95%
$\varnothing 2,85\text{mm}$	$\pm 0,10\text{mm}$	>95%

Physical Properties

Description	Typical Value
Specific gravity	1,06 g/cc
MFR 200 $^{\circ}\text{C}/10\text{kg}$	12g/10min
Tensile stress	39,2 Mpa
Elong. at break (MD)	35%
Tensile modulus	1830 Mpa
Impact strength Izod method 23 $^{\circ}\text{C}$	17 KJ/m ²

Thermal Properties

Size	Roundness
Printing temp.	220-260 $^{\circ}\text{C}$
Melting temp.	210-240 $^{\circ}\text{C}$
Heat Deflection Temp.	$\pm 82^{\circ}\text{C}$

PrintaMent METAL

DATASHEET

Description

METAL is our 80% bronze filled filament which is easy to print, sand & polish. With this filament you can create the most beautiful objects with real METAL characteristics, such as a 3 x higher weight than standard PLA, a METAL feel & touch and thermo-conductivity. A special lubricant increases the flow and prevents the filament to adhere to the nozzle. Finally all above combined with the correct hardness results in a filament that can be printed on almost every type of FDM 3D printer available on the market with retraction enabled on nozzles ≥ 0.35 mm. please consider to use a hardened nozzle

Features

- Approx. 80% bronze content
- PLA-based, 3 times heavier
- Metal feel & "cold" touch
- Excellent printability on both direct & Bowden style 3D printers
- Processing additive added for easy & reliable printing
- Quick & easy polishing and other post-processing
- Possibility to print with retraction
- Works on nozzles ≥ 0.35 mm

Colors

Bronze - Copper

Additional Info

METAL filament can be printed without a heated bed, but if you do have a heated bed the recommended temperature is ± 35 -

60°C. Storage: Cool and dry (15-25°C) and away from UV light. This enhances the shelf life significantly.

Technical Data

Dimensions

Size	Tolerance	Roundness
$\varnothing 1,75\text{mm}$	$\pm 0,05\text{mm}$	>95%
$\varnothing 2,85\text{mm}$	$\pm 0,10\text{mm}$	>95%

Physical Properties (Bronze)

Description	Typical Value
Specific gravity	3,39 g/cc
Yield stress (50mm/min)	18,3 MPa
Strain at break (50mm/min)	8,00%
Tensile (E) modulus (1mm/min)	3990 Mpa
Impact strength, Izod unnotched 23 °C	11,3 KJ/m ²

Physical Properties (Copper)

Description	Typical Value
Specific gravity	3,41 g/cc
Yield stress (50mm/min)	18,3 MPa
Strain at break (50mm/min)	4,5%
E-modulus (1mm/min)	4210 Mpa
Impact strength, Izod unnotched 23 °C	9,3 KJ/m ²

Thermal Properties

Size	Roundness
Printing temp.	195-220°C
Melting temp.	195 \pm 10°C
Heat Deflection Temp.	± 65 °C

PrintaMent PA12

DATASHEET

Description

PA12 is a high-performance polyamide filament which natural colour is crystal clear. The polymer nylon PA12 is widely used in the automotive, machinery and engineering industry since it combines mechanical strength, flexibility, transparency, UV resistance and superior chemical resistance. PA12 is easy to print, has a high impact strength, even at low temperatures, a very high glass transition temperature and has a low water absorption compared with other polyamides which leaves the mechanical properties unaffected. PA12 is the filament to print objects with a top performance.

Features

- Strong & flexible
- Crystal clear natural colour
- Superior chemical & UV resistance
- Low water absorption

Colors

Clear – Black – White

Additional Info

PA12 NYLON needs to be dried for good 3D print results, A standard air-circulated oven is sufficient. A guideline for drying is 4-6 hours at 60°C for 100g. Recommended temperature for heated bed is $\pm 100-110^{\circ}\text{C}$ or even higher. PA12 will not bond to glass,

but adheres well to masonite, poplar wood or blue painters tape. PA12 can be used on most common desktop FDM or FFF technology 3D printers. Storage: After use store Cool and dry ($15-25^{\circ}\text{C}$) and away from UV light. This enhances the shelf life significantly.

Technical Data

Dimensions

Size	Tolerance	Roundness
$\varnothing 1,75\text{mm}$	$\pm 0,05\text{mm}$	>95%
$\varnothing 2,85\text{mm}$	$\pm 0,10\text{mm}$	>95%

Physical Properties

Description	Typical Value
Specific gravity	1,05 g/cc
Viscosity number (in relation to PA12)	160 ± 10 cm ³ /g (medium viscous)
Tensile strength	58 Mpa
Strain at break	>100%
Tensile modulus	2020 MPa
Impact strength Charpy method 23°C	Unnotched No B Notched 13 KJ/m ²
Shore D Hardness	84

Thermal Properties

Size	Roundness
Printing temp.	240-275 °C
Melting temp.	$250 \pm 10^{\circ}\text{C}$
HDT 264psi.annealed	105°C

PrintaMent PC-ABS

DATASHEET

Description

PC-ABS is an incredibly strong filament with an even higher impact resistance than our regular ABS. This is a consequence of the addition of the proper amount of polycarbonate in this modification, which also creates a nearly perfect interlayer adhesion and a beautiful surface gloss. The above features, combined with a highly stable printing process makes PC-ABS the perfect material for mechanical parts and tools, which should be light and strong and show minimal wear after prolonged use.

Features

- Improved interlayer adhesion
- High impact resistance
- High surface gloss
- Stable printing process

Features Flame-Retardant-Black

- Flame retardant (UL-94 V0)
- Halogen free
- Superb interlayer adhesion
- High surface gloss
- Stable printing process

Colors

Black – White – Flame Retardant Black

Additional Info

Recommended temperature for heated bed is +100°C. We recommend kapton and / or pva glue stick for adhesion. PC-ABS can be used on all common desktop FDM or FFF technology 3D printers. Storage: Cool and dry (15-25°C) and away from UV light. This enhances the shelf life significantly.

Technical Data

Dimensions

Size	Tolerance	Roundness
Ø1,75mm	±0,05mm	>95%
Ø2,85mm	±0,10mm	>95%

Physical Properties

Description	Typical Value
Specific gravity	1,05 g/cc
MFR 220°C/10kg	7,0 g/10 min
Tensile strength	46 Mpa
Strain at break	13%
Tensile modulus	2100 Mpa
Impact strength Izod method 23°C	40 KJ/m ²

Thermal Properties

Size	Roundness
Printing temp.	245-275°C
Melting temp.	250±10°C
Heat Deflection Temp.	±108°C

Physical Properties (flame retardant)

Description	Typical Value
Specific gravity	1,18 g/cc
MFI 260 oC (5 kg)	N.D.
Yield stress	65,1 Mpa
Strain at break	62%
Tensile (E) modulus	2400 Mpa
Impact strength izod method 23°C	12,5 KJ/m ²

Thermal Properties (flame retardant)

Size	Roundness
Printing temp.	240-270°C
Melting temp.	250±10°C
Heat Deflection Temp.	110°C
Flame Rating (UL-94)	V0

PrintaMent PC

DATASHEET

Description

PC is a high-performance plastic that possesses a unique balance of toughness, dimensional stability, optical clarity, high heat resistance and excellent electrical resistance. PC is commonly used to make all sorts of products including bullet-proof glass, riot shields, cellphone exteriors and many other products that require an engineering grade material. We recommend PC for more experienced users that are looking to extend their filament options.

Features

- Great strength & stiffness
- High optical clarity
- Resistant to high temperatures up to 140 °C
- Low flammability (UL-94 V2)

Colors

Clear

Additional Info

Recommended temperature for the heated bed is $\pm 110^{\circ}\text{C}$. PC is printed at a high temperature to make the final product extra strong. PC can be used on all common desktop FDM or FFF technology 3D printers. Storage: Cool and dry ($15\text{-}25^{\circ}\text{C}$)

and away from UV light. This enhances the shelf life significantly.

Technical Data

Dimensions

Size	Tolerance	Roundness
$\varnothing 1,75\text{mm}$	$\pm 0,05\text{mm}$	>95%
$\varnothing 2,85\text{mm}$	$\pm 0,10\text{mm}$	>95%

Physical Properties

Description	Typical Value
Specific gravity	1,2 g/cc
MFI 300 °C/1,2g	12 g/10 min
Tensile strength	65 Mpa
Tensile elongation ISO 527 50mm/min	120%
Tensile modulus ISO 527 1mm/min	2350 Mpa
Impact strength Charpy method 23 °C	36 KJ/m2

Thermal Properties

Size	Roundness
Printing temp.	270-290 °C
vicat softening temp.	145 °C

PrintaMent PET-G

DATASHEET

Description

PET-G is a strong, high clarity, odor neutral and easy to print filament for 3D printing. These characteristics, together with the high impact strength, excellent flexibility and practically no shrinkage make PET-G an excellent material which combines the advantages of both PLA and ABS. The filament is hydrophobic and therefore does not absorb water. In short, PET-G has many great features and is the perfect addition to any filament assortment.

Features

- High clarity
- Strong & Flexible
- Almost no "warping"
- Hydrophobic
- Food Contact Acceptable
- Odor neutral printing

Colors

Clear – Black - Snow White - Red - Blue - Dark Blue - Lime Green - Basalt Grey - Gold - Silver - Flash Yellow - Flash Orange - Yellow Transparent - Red Transparent - Green Transparent - Blue Transparent - Black Transparent

Additional Info

Recommended temperature for heated bed is $\pm 35-60^{\circ}\text{C}$. Adhesion is possible on different surfaces. PET-G can be used on all common desktop FDM or FFF technology 3D printers. Storage: Cool and dry ($15-25^{\circ}\text{C}$)

and away from UV light. This enhances the shelf life significantly.

Technical Data

Dimensions

Size	Tolerance	Roundness
$\varnothing 1,75\text{mm}$	$\pm 0,05\text{mm}$	>95%
$\varnothing 2,85\text{mm}$	$\pm 0,10\text{mm}$	>95%

Physical Properties

Description	Typical Value
Specific gravity	1,27 g/cc
Mold shrinkage	0,2-0,5%
Tensile strength @yield	50 MPa
Elongation at break	120%
Flexural modulus	2150 MPa
Impact Strength Izod Notched 23°C	85 J/m
Rockwell Hardness	105
Moisture absorption	0,13%

Thermal Properties

Size	Roundness
printing temp.	$195-220^{\circ}\text{C}$
Heat Distortion T.	70°C
Light Transmittance	90%

PrintaMent PVA-M

DATASHEET

Description

PVA-M filament is our preferred, cold water soluble, supporting material for dual extruder 3D printing. The modification on the raw material results in a filament that is much more thermally stable than a regular PVA. It also bonds well to PLA, ABS and PET-G, which enlarges the application field significantly. This polyvinyl alcohol-based filament is non toxic and biodegradable once dissolved in water. Easy printing, much less failures and easy removability makes this the supporting material you should try.

Features

- Improved formula with enhanced stability in printing
- Thermally much more stable than a regular PVA
- Good bonding to PLA, PET-G, ABS
- Biodegradable when dissolved in water

Colors

Natural

Additional Info

Recommended temperature for heated bed is $\pm 35-60^{\circ}\text{C}$. Do not exceed a printing temperature of 225°C , because then PVA crystallizes quickly and it will no longer flow and/or dissolve in water. The speed at which the product dissolves in water is dependent on the volume of the printed object and the temperature of the water. PVA-M dissolves in cold water. Higher water temperature (up to 70°C is no

problem) will accelerate the dissolution. Storage: Cool and dry!

Technical Data

Dimensions

Size	Tolerance	Roundness
$\varnothing 1,75\text{mm}$	$\pm 0,05\text{mm}$	>95%
$\varnothing 2,85\text{mm}$	$\pm 0,10\text{mm}$	>95%

Physical Properties

Description	Typical Value
Specific gravity	1,22 g/cc
MFR 220°C	2,3 g/10 min
Tensile strength	-
Strain at break	-
Tensile modulus (1mm/min)	3500 Mpa
Impact strength Charpy method 23°C	Notched 1,7 KJ/m ²

Thermal Properties

Size	Roundness
Printing temp.	180-205 $^{\circ}\text{C}$
Melting temp.	163 $^{\circ}\text{C}$
vicat softening temp.	60 $^{\circ}\text{C}$

PrintaMent TCH-PLA

DATASHEET

Description

TCH-PLA is a tough, easy to use high grade colour changing PLA type of filament. The dark grey colour will change to natural above 29°C, but much faster above 33°C or higher. Other features are according our slightly modified PLA product, so tougher and less brittle as a regular PLA. Due to a low shrinkage factor PLA will not deform after cooling. Poly Lactic Acid is a biodegradable plastic made from renewable natural resources and one of the most popular materials for 3D printing.

Features

- Colour changing grey-natural >33°C
- Tougher and less brittle compared to regular PLA
- Easy to print at low temperature
- Low warping
- Biodegradable
- Limited smell

Colors

Grey-Natural

Additional Info

Due to its low tendency to warp TCH-PLA can also be printed without a heated bed. If you have a heated bed the recommended temperature is ± 35-60°C. TCH-PLA can be used on all common desktop FDM or FFF technology 3D printers. Storage: Cool and dry (15-25°C) and away from UV light. This enhances the shelf life significantly.

Technical Data

Dimensions

Size	Tolerance	Roundness
Ø1,75mm	±0,05mm	>95%
Ø2,85mm	±0,10mm	>95%

Physical Properties

Description	Typical Value
Specific gravity	1,24 g/cc
MFI	6,0 g/10 min
Tensile strength	110 MPa (MD) 145 MPa (TD)
Elongation at break	160% (MD) 100% (TD)
Tensile modulus	3310 MPa (MD) 3860 Mpa (TD)
Impact Strength	7,5 KJ/m2

Thermal Properties

Size	Roundness
Printing temp.	180-210°C
Melting temp.	210±10°C
vicat softening temp.	60°C

PrintaMent WOOD

DATASHEET

Description

WOOD is a modified PLA based type of filament, that smells and feels like wood. The different wood-types enable us to manufacture this wide range of natural wood colours. The prints very easy, even with nozzles >0.5mm as the wood particles then don't block the nozzle.

Features

- Feels and smells like WOOD
- Easy to print at low temperature
- Very low warping
- Biodegradable
- Easily printable with $\geq 0,5\text{mm}$ nozzle

Colors

Light - Dark

Additional Info

Due to its low tendency to warp WOOD can also be printed without a heated bed. If you have a heated bed the recommended temperature is $\pm 35\text{-}60^\circ\text{C}$. We advise a nozzle $\geq 0,5\text{mm}$. WOOD can be used on all common desktop FDM or FFF technology 3D printers. Storage: Cool and dry ($15\text{-}25^\circ\text{C}$) and away from UV light. This enhances the shelf life significantly.

Technical Data

Dimensions

Size	Tolerance	Roundness
$\varnothing 1,75\text{mm}$	$\pm 0,05\text{mm}$	>95%
$\varnothing 2,85\text{mm}$	$\pm 0,10\text{mm}$	>95%

Physical Properties

Description	Typical Value
Specific gravity	1,20 g/cc
MFR 220 °C	5,0 g/10 min
Tensile strength	70 MPa (MD) 100 MPa (TD)
Strain at break	170% (MD) 110% (TD)
Tensile modulus (1mm/min)	1900 MPa (MD) 2300 Mpa (TD)
Impact strength Charpy method 23 °C	7,0 KJ/m ²

Thermal Properties

Size	Roundness
Printing temp.	205-235 °C
Melting temp.	150 °C
vicat softening temp.	45 °C

