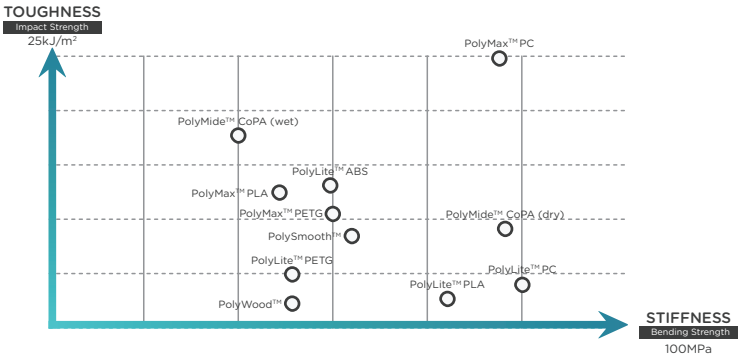
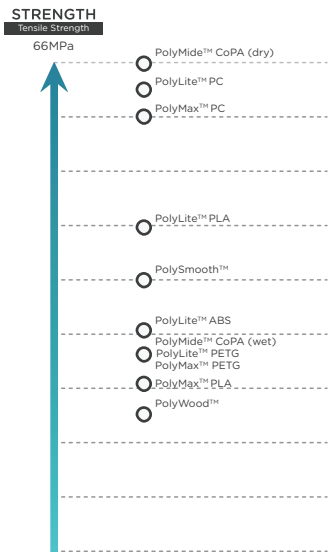
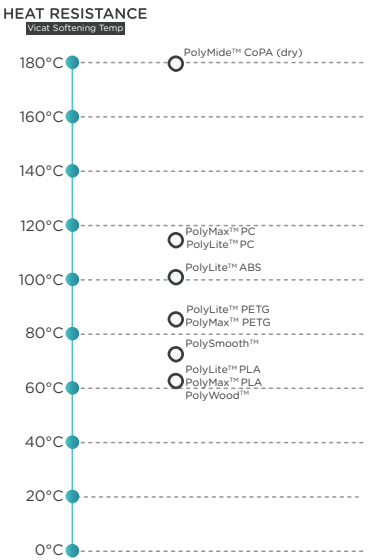
Product Portfolio 2019

INDEX

Material Comparison







About Polymaker

Who We Are?

Polymaker produces high quality 3D printing materials with a comprehensive range of properties and functions, ranging from high engineering strength to unique aesthetic solutions. We strive to bridge the gap between prototyping and production, by equipping designers and engineers with the best material solutions.

Research & Development

At the core of Polymaker is our research & development. All our materials are designed and fine-tuned from the ground up to offer the best combination of printability and functionality.

Quality Control

Polymaker implements one of the industry's most rigorous and technologically advanced quality control systems to ensure the highest possible quality in all our products.

Locations

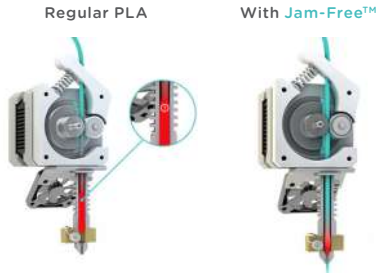
Polymaker is a headquartered in Shanghai, with reginal offices located in the USA and The Netherlands. Our materials are available worldwide thanks to our regional channel partners.

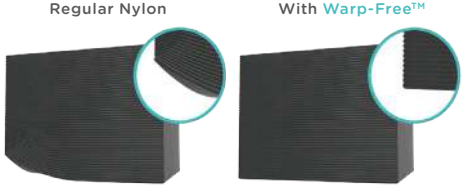

Polymaker LLC
Savannah, USA
Polymaker B.V.
Utrecht, Netherlands
R&D and Manufacturing
Suzhou, China
Global Headquarters
Shanghai, China

Technologies

JAM-FREE™

Jam-Free™ technology improves the heat stability of Polymaker's PLA filaments with softening temperatures over 140 °C. As a result, Polymaker's PLA filaments show minimal softening in the "cold end" and can melt rapidly once entering the heating zone, leading to excellent printing quality with zero risk of nozzle jams.





WARP-FREE™

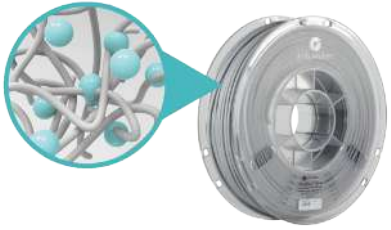
Warp-Free™ technology enables the production of Nylon-based filaments that can be 3D printed with excellent dimensional stability and near-zero warpage. This is achieved by the fine control of micro-structure and crystallization behavior of Nylon, which enables the material to fully release the internal stress before solidification.

ASH-FREE™

Ash-Free™ technology allows Polymaker's filament which has been designed for investment casting to burn off cleanly without any residue, enabling defect-free metal parts. 3D printing has been used to produce investment casting patterns as it cuts down both the cost and lead time for small-volume production runs.

LAYER-FREE™

Layer-Free™ technology involves exposing a 3D printed part to an aerosol of micro-sized alcohol droplets, generated by a rapidly vibrating, perforated membrane called the nebulizer. The aerosol will then be adsorbed by the surface of the 3D printed part and render it smooth and layer-free.

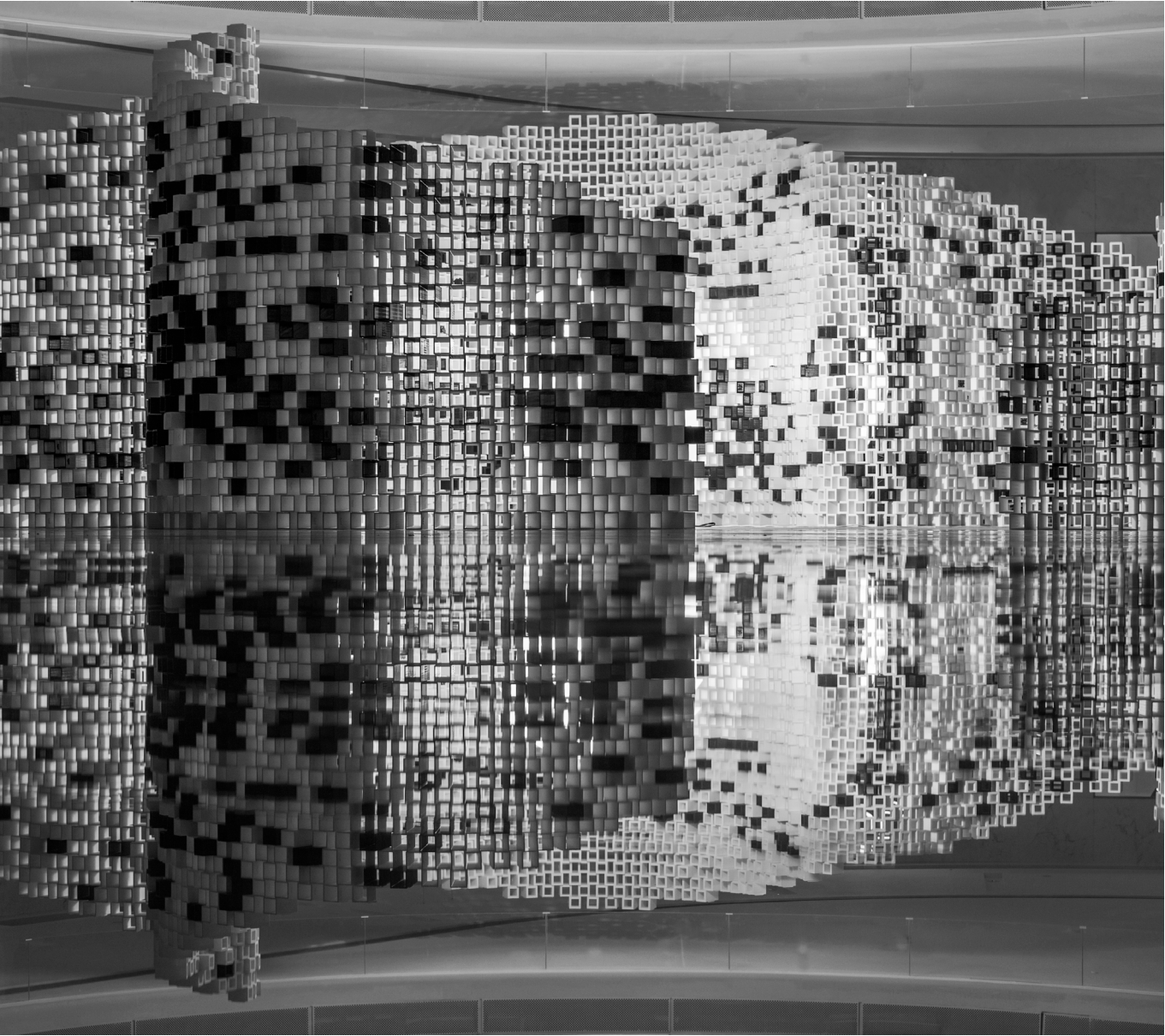


NANO-REINFORCEMENT

Nano-reinforcement technology is applied to produce filaments with excellent mechanical properties and printing quality. It dramatically improves the toughness of the material by increasing its impact resistance.

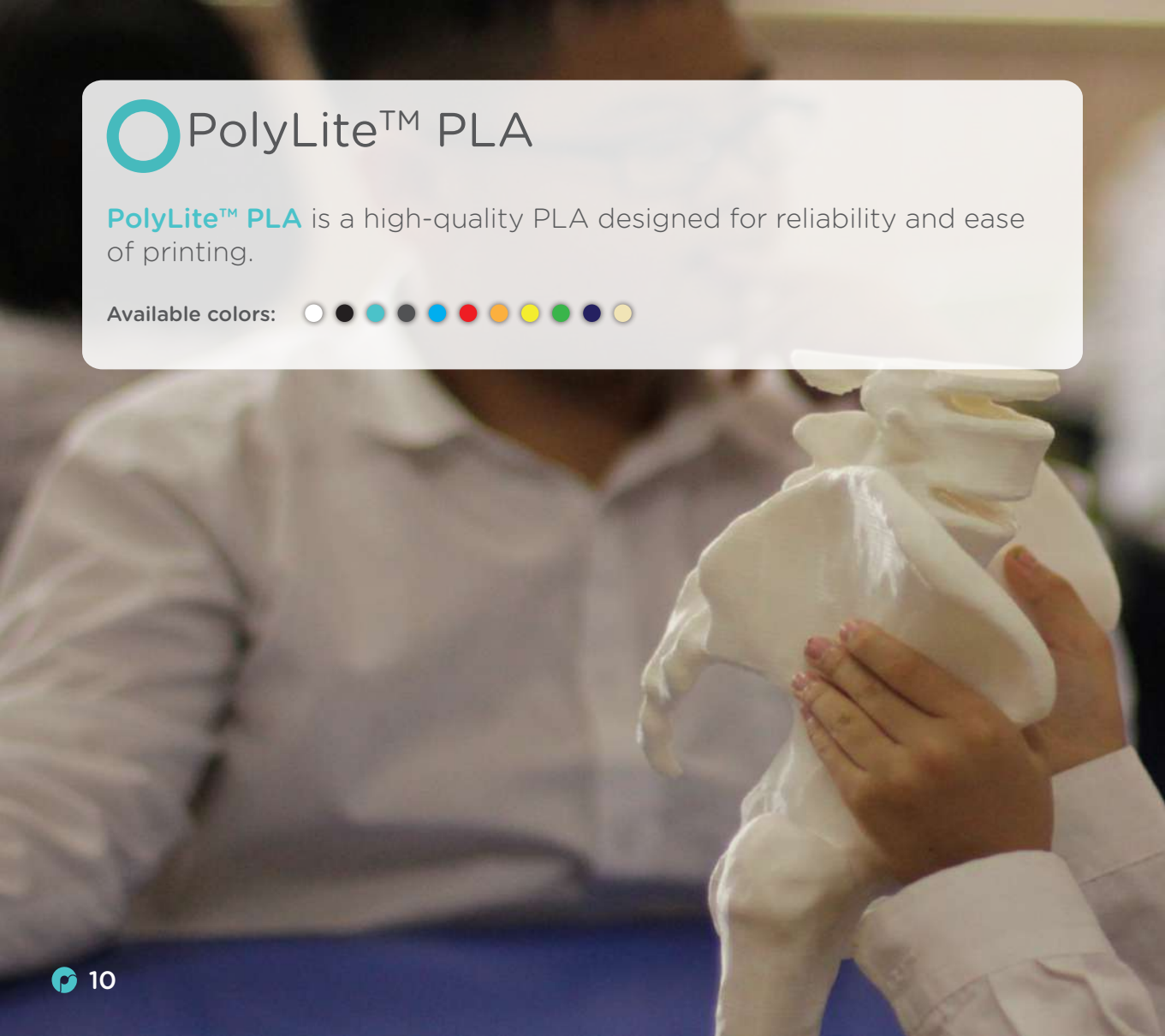
STABILIZED FOAMING™

Stabilized Foaming™ technology is used to produce foamed filaments, whose foam structure can survive the printing process and be inherited by the printed parts. This enables light weight 3D printed parts with unprecedented surface finish.



PolyLite™

PolyLite™ is a family of 3D printing filaments made with the best raw materials to deliver exceptional quality and reliability. PolyLite™ covers the most popular 3D printing materials to meet your everyday needs in design and prototyping.



PolyLite™ PLA

PolyLite™ PLA is a high-quality PLA designed for reliability and ease of printing.

Available colors:

Physical properties

Property	Testing method	Typical value
Density	ASTM D792 (ISO 1183, GB/T 1033)	1.17 - 1.24 (g/cm³ at 21.5 °C)
Glass transition temperature	DSC, 10 °C/min	61 (°C)
Vicat softening temperature	ASTM D1525 (ISO 306, GB/T 1633)	63 (°C)
Melt Index	210 °C, 2.16 kg	7 - 11 (g/10 min)
Melting temperature	DSC, 10 °C/min	150 (°C)
Crystallization temperature	DSC, 10 °C/min	114 (°C)

Mechanical properties

Property	Testing method	Typical value
Young's modulus (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	2636 ± 330 (MPa)
Tensile strength (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	46.6 ± 0.9 (MPa)
Elongation at break (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	1.9 ± 0.2 (%)
Bending modulus	ASTM D790 (ISO 178, GB/T 9341)	3283 ± 132 (MPa)
Bending strength	ASTM D790 (ISO 178, GB/T 9341)	85.1 ± 2.9 (MPa)
Charpy impact strength	ASTM D256 (ISO 527, GB/T 1040)	2.7 ± 0.2 (kJ/m²)

Drying settings

80˚C for 8h

Diameter accuracy (2.85/1.75 mm):

70%	is within	+/- 0.01
97%	is within	+/- 0.02
99%	is within	+/- 0.03
99.9%	is within	+/- 0.04

Weight accuracy:

600g	+/-	20g
750g	+/-	20g
1000g	+/-	30g
3000g	+/-	60g

PolyLite™ PETG

PolyLite™ PETG is an affordable PETG filament with balanced mechanical properties and ease of printing.

Available colors:

Physical properties

Property	Testing method	Typical value
Density	ASTM D792 (ISO 1183, GB/T 1033)	1.25 (g/cm³ at 21.5 °C)
Glass transition temperature	DSC, 10 °C/min	81 (°C)
Vicat softening temperature	ASTM D1525 (ISO 306, GB/T 1633)	84 (°C)
Melt Index	210 °C, 2.16 kg	3.9 (g/10 min)
Melt Index	240 °C, 2.16 kg	10.8 (g/10 min)

Mechanical properties

Property	Testing method	Typical value
Young's modulus (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	1472 ± 270 (MPa)
Tensile strength (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	31.9 ± 1.1 (MPa)
Elongation at break (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	6.8 ± 0.9 (%)
Bending Modulus	ASTM D790 (ISO 178, GB/T 9341)	1174 ± 64 (MPa)
Bending strength	ASTMD790 (ISO 178, GB/T 9341)	53.7 ± 2.4 (MPa)
Charpy impact strength	ASTM D256 (ISO 179, GB/T 1043)	5.1 ± 0.3 (kJ/m²)

Drying settings

70˚C for 8h

Diameter accuracy (2.85/1.75 mm):

70%	is within	+/- 0.01
97%	is within	+/- 0.02
99%	is within	+/- 0.03
99.9%	is within	+/- 0.04

Weight accuracy:

600g	+/-	20g
750g	+/-	20g
1000g	+/-	30g
3000g	+/-	60g

PolyLite™ ABS

PolyLite™ ABS is made with a specialty bulk-polymerized ABS resin, which has significantly lower volatile content compared to traditional ABS resins. It delivers excellent printing quality with minimal odor during printing.

Available colors:

Physical properties

Property	Testing method	Typical value
Density	ASTM D792 (ISO 1183, GB/T 1033)	1.12 (g/cm^3 at 21.5 °C)
Glass transition temperature	DSC, 10 °C/min	101 (°C)
Vicat softening temperature	ASTM D1525 (ISO 306, GB/T 1633)	104 (°C)
Melt Index	220 °C, 2.16 kg	9 - 14 (g/10 min)
Decomposition temperature	TGA, 20 °C/min	> 380 (°C)

Mechanical properties

Property	Testing method	Typical value
Young's modulus (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	2174 ± 285 (MPa)
Tensile strength (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	33.3 ± 0.8 (MPa)
Elongation at break (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	2.7 ± 0.4 (%)
Bending modulus	ASTM D790 (ISO 178, GB/T 9341)	1339 ± 238 (MPa)
Bending strength	ASTM D790 (ISO 178, GB/T 9341)	59.0 ± 1.3 (MPa)
Charpy impact strength	ASTM D256 (ISO 179, GB/T 1043)	12.6 ± 1.1 (kJ/m^2)

Drying settings

80˚C for 8h

Diameter accuracy (2.85/1.75 mm):

70%	is within	+/- 0.01
97%	is within	+/- 0.02
99%	is within	+/- 0.03
99.9%	is within	+/- 0.04

Weight accuracy:

600g	+/-	20g
750g	+/-	20g
1000g	+/-	30g
3000g	+/-	60g

PolyLite™ PC

PolyLite™ PC is produced using a polycarbonate resin specifically engineered for 3D printing. It delivers good stiffness and heat resistance with light diffusing properties.

Available colors:

Physical properties

Property	Testing method	Typical value
Density	ASTM D792 (ISO 1183, GB/T 1033)	1.19 – 1.20 (g/cm³ at 21.5 °C)
Glass transition temperature	DSC, 10 °C/min	113 (°C)
Vicat softening temperature	ASTM D1525 (ISO 306, GB/T 1633)	119 (°C)
Melt Index	260 °C, 1.2 kg	8-11 (g/10 min)
Decomposition temperature	TGA, 20 °C/min	129- 132 (°C)

Mechanical properties

Property	Testing method	Typical value
Young's modulus (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	2307 ± 60 (MPa)
Tensile strength (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	62.7 ± 1.3 (MPa)
Elongation at break (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	3.2 ± 0.4 (%)
Bending modulus	ASTM D790 (ISO 178, GB/T 9341)	2477 ± 159 (MPa)
Bending strength	ASTM D790 (ISO 178, GB/T 9341)	100.4 ± 2.7 (MPa)
Charpy impact strength	ASTM D256 (ISO 527, GB/T 1040)	3.4 ± 0.1 (kJ/m²)

Drying settings

80˚C for 8h

Diameter accuracy (2.85/1.75 mm):

70%	is within	+/- 0.01
97%	is within	+/- 0.02
99%	is within	+/- 0.03
99.9%	is within	+/- 0.04

Weight accuracy:

600g	+/-	20g
750g	+/-	20g
1000g	+/-	30g
3000g	+/-	60g

PolyMax™

PolyMax™ is a family of advanced 3D printing filaments produced with Polymaker's Nano-reinforcement technology, to deliver exceptional mechanical properties and printing quality.

PolyMax™ PLA

PolyMax™ PLA is an incredibly easy-to-print filament with improved mechanical properties, making it an excellent alternative to ABS.

Available colors:

Physical properties

Property	Testing method	Typical value
Density	ASTM D792 (ISO 1183, GB/T 1033)	1.17 - 1.24 (g/cm³ at 21.5 °C)
Glass transition temperature	DSC, 10 °C/min	61 (°C)
Vicat softening temperature	ASTM D1525 (ISO 306, GB/T 1633)	62 (°C)
Melt Index	210 °C, 2.6 kg	5-8 (g/10 min)
Melting temperature	DSC, 10 °C/min	149 (°C)
Crystallization temperature	DSC, 10 °C/min	149 (°C)

Mechanical properties

Property	Testing method	Typical value
Young's modulus (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	1879 ± 109 (MPa)
Tensile strength (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	28.1 ± 1.3 (MPa)
Elongation at break (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	1.4 ± 0.3 (%)
Bending modulus	ASTM D790 (ISO 178, GB/T 9341)	2119 ± 60 (MPa)
Bending strength	ASTM D790 (ISO 178, GB/T 9341)	48.0 ± 1.9 (MPa)
Charpy impact strength	ASTM D256 (ISO 179, GB/T 1043)	12.2 ± 1.03 (kJ/m²)

Drying settings

80˚C for 8h

Diameter accuracy (2.85/1.75 mm):

70%	is within	+/- 0.01
97%	is within	+/- 0.02
99%	is within	+/- 0.03
99.9%	is within	+/- 0.04

Weight accuracy:

600g	+/-	20g
750g	+/-	20g
1000g	+/-	30g
3000g	+/-	60g

PolyMax™ PC

PolyMax™ PC is an engineered PC filament combining excellent strength, toughness, heat resistance and printing quality. It is the ideal choice for a wide range of engineering applications.

Available colors:

Physical properties

Property	Testing method	Typical value
Density	ASTM D792 (ISO 1183, GB/T 1033)	1.18 – 1.20 (g/cm³ at 21.5 °C)
Glass transition temperature	DSC, 10 °C/min	113 (°C)
Vicat softening temperature	ASTM D1525 (ISO 306, GB/T 1633)	117 (°C)
Melt Index	260 °C, 1.2 kg	6-8 (g/10 min)
Decomposition temperature	TGA, 20 °C/min	127- 130 (°C)

Mechanical properties

Property	Testing method	Typical value
Young's modulus (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	2048 ± 66 (MPa)
Tensile strength (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	59.7 ± 1.8 (MPa)
Elongation at break (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	12.2 ± 1.4 (%)
Bending modulus	ASTM D790 (ISO 178, GB/T 9341)	2044 ± 55 (MPa)
Bending strength	ASTM D790 (ISO 178, GB/T 9341)	94.1 ±0.9 (MPa)
Charpy impact strength	ASTM D256 (ISO 179, GB/T 1043)	25.1 ±1.9 (kJ/m²)

Drying settings

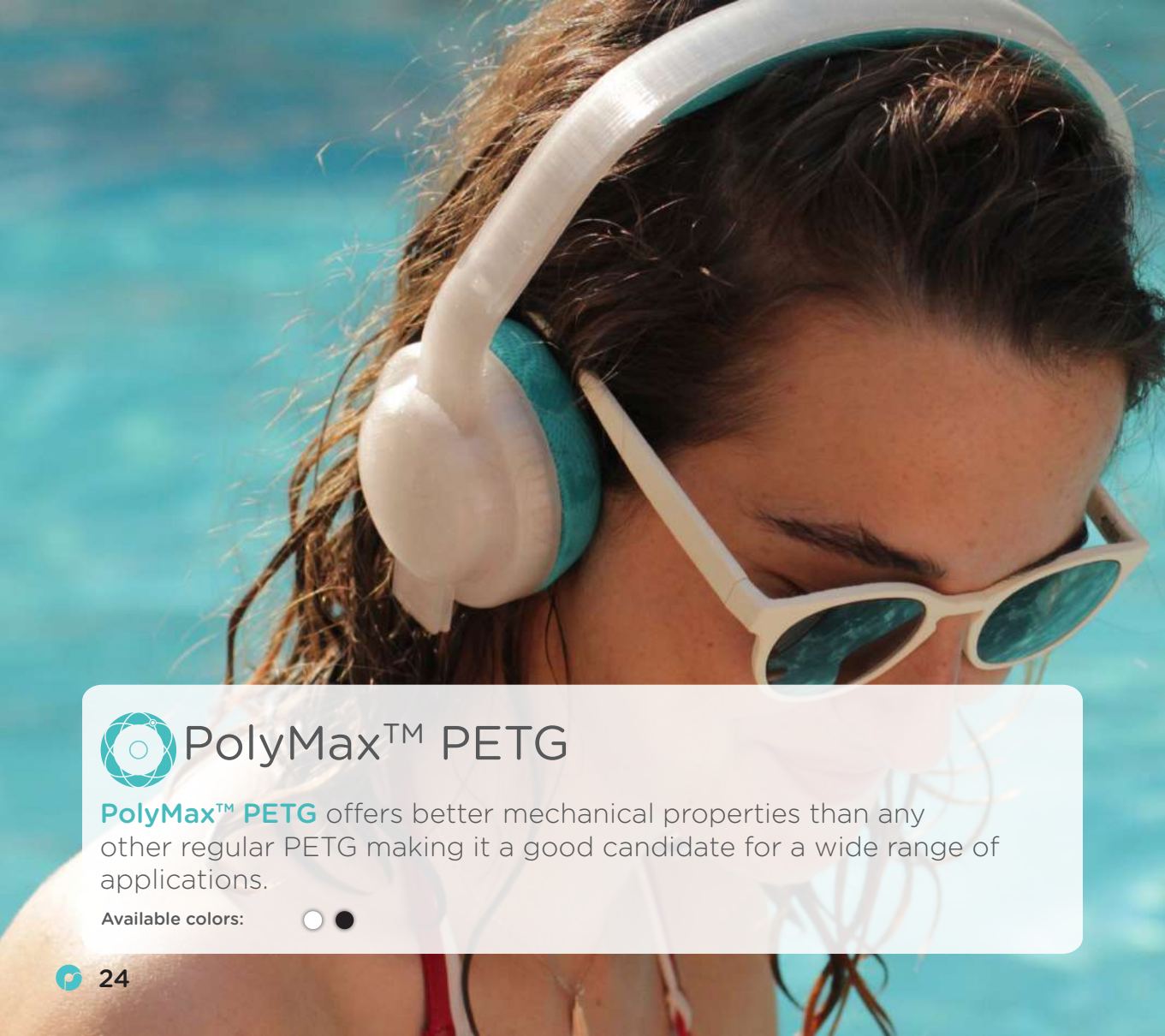
80˚C for 8h

Diameter accuracy (2.85/1.75 mm):

70%	is within	+/- 0.01
97%	is within	+/- 0.02
99%	is within	+/- 0.03
99.9%	is within	+/- 0.04

Weight accuracy:

600g	+/-	20g
750g	+/-	20g
1000g	+/-	30g
3000g	+/-	60g



PolyMax™ PETG

PolyMax™ PETG offers better mechanical properties than any other regular PETG making it a good candidate for a wide range of applications.

Available colors:

Physical properties

Property	Testing method	Typical value
Density	ASTM D792 (ISO 1183, GB/T 1033)	1.25 (g/cm³ at 21.5 °C)
Glass transition temperature	DSC, 10 °C/min	79 (°C)
Vicat softening temperature	ASTM D1525 (ISO 306, GB/T 1633)	82 (°C)
Melt Index	210 °C, 2.16 kg	3.9 (g/10 min)
Melt Index	240 °C, 2.16 kg	17.1 (g/10 min)

Mechanical properties

Property	Testing method	Typical value
Young's modulus (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	1523 ± 50 (MPa)
Tensile strength (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	31.7 ± 0.1 (MPa)
Elongation at break (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	4.4 ± 0.6 (%)
Bending strength	ASTMD790 (ISO 178, GB/T 9341)	58.3 ± 4 (MPa)
Charpy impact strength	ASTM D256 (ISO 179, GB/T 1043)	9.7 ± 2.6 (kJ/m²)

Drying settings

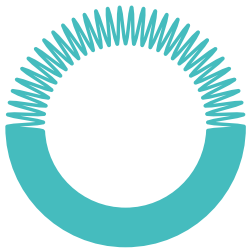
70˚C for 8h

Diameter accuracy (2.85/1.75 mm):

70%	is within	+/- 0.01
97%	is within	+/- 0.02
99%	is within	+/- 0.03
99.9%	is within	+/- 0.04

Weight accuracy:

600g	+/-	20g
750g	+/-	20g
1000g	+/-	30g
3000g	+/-	60g



PolyFlex™

PolyFlex™ is a family of high-quality flexible materials. It provides the perfect solution for applications where high flexibility and durability are required.

PolyFlex™ TPU95

PolyFlex™ TPU95 is a thermoplastic polyurethane (TPU) based filament specifically engineered to work on most desktop 3D printers. It has a shore hardness of 95A and can stretch more than 3 times its original length.

Available colors:

Physical properties

Property	Testing method	Typical value
Density	ASTM D792 (ISO 1183, GB/T 1033)	1.20 - 1.24 (g/cm^3 at 21.5 °C)
Melt Index	210 °C, 1.2 kg	3-6 (g/10 min)

Mechanical properties

Property	Testing method	Typical value
100% modulus (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	9.4 ± 0.3 (MPa)
Tensile strength (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	29.0 ± 2.8 (MPa)
Elongation at break (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	330.1 ± 14.9 (%)
Shore hardness	ASTM D2240 (ISO 7619, GB/T 31)	~95A

Drying settings

70˚C for 12h

Diameter accuracy (2.85/1.75 mm):

70%	is within	+/- 0.01
97%	is within	+/- 0.02
99%	is within	+/- 0.03
99.9%	is within	+/- 0.04

Weight accuracy:

600g	+/-	20g
750g	+/-	20g
1000g	+/-	30g
3000g	+/-	60g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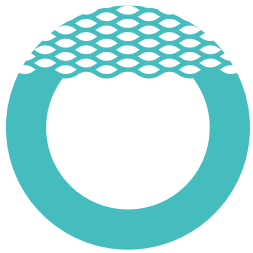
L5EV



PolyMide™

PolyMide™ is a family of Nylon/polyamide based filaments. Produced with Polymaker's Warp-Free™ technology, PolyMide™ filaments deliver engineering properties intrinsic to Nylon and ease of printing.

PolyMide™ CoPA

PolyMide™ CoPA is based on a copolymer of Nylon 6 and Nylon 6,6. The filament combines excellent strength, toughness, and heat resistance of up to 180˚C.

Available colors:

Physical properties

Property	Testing method	Typical value
Density	ASTM D792 (ISO 1183, GB/T 1033)	1.12 (g/cm³ at 21.5 °C)
Glass transition temperature	DSC, 10 °C/min	67 (°C)
Vicat softening temperature	ASTM D1525 (ISO 306, GB/T 1633)	180 (°C)
Melt Index	260 °C, 1.2 kg	12 (g/10 min)
Melting temperature	DSC, 10 °C/min	190 (°C)
Crystallization temperature	DSC, 10 °C/min	128 (°C)
Decomposition temperature	TGA, 20 °C/min	370 (°C)

Mechanical properties

Property	Testing method	Typical value
Young's modulus (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	2223 ± 199 (MPa)
Tensile strength (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	66.2 ± 0.9 (MPa)
Elongation at break (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	9.9 ± 1.5 (%)
Bending modulus	ASTM D790 (ISO 178, GB/T 9341)	1667 ± 118 (MPa)
Bending strength	ASTM D790 (ISO 178, GB/T 9341)	97.0 ± 1.1 (MPa)
Charpy impact strength	ASTM D256 (ISO 527, GB/T 1040)	9.6 ± 1.4 (kJ/m²)

Drying settings

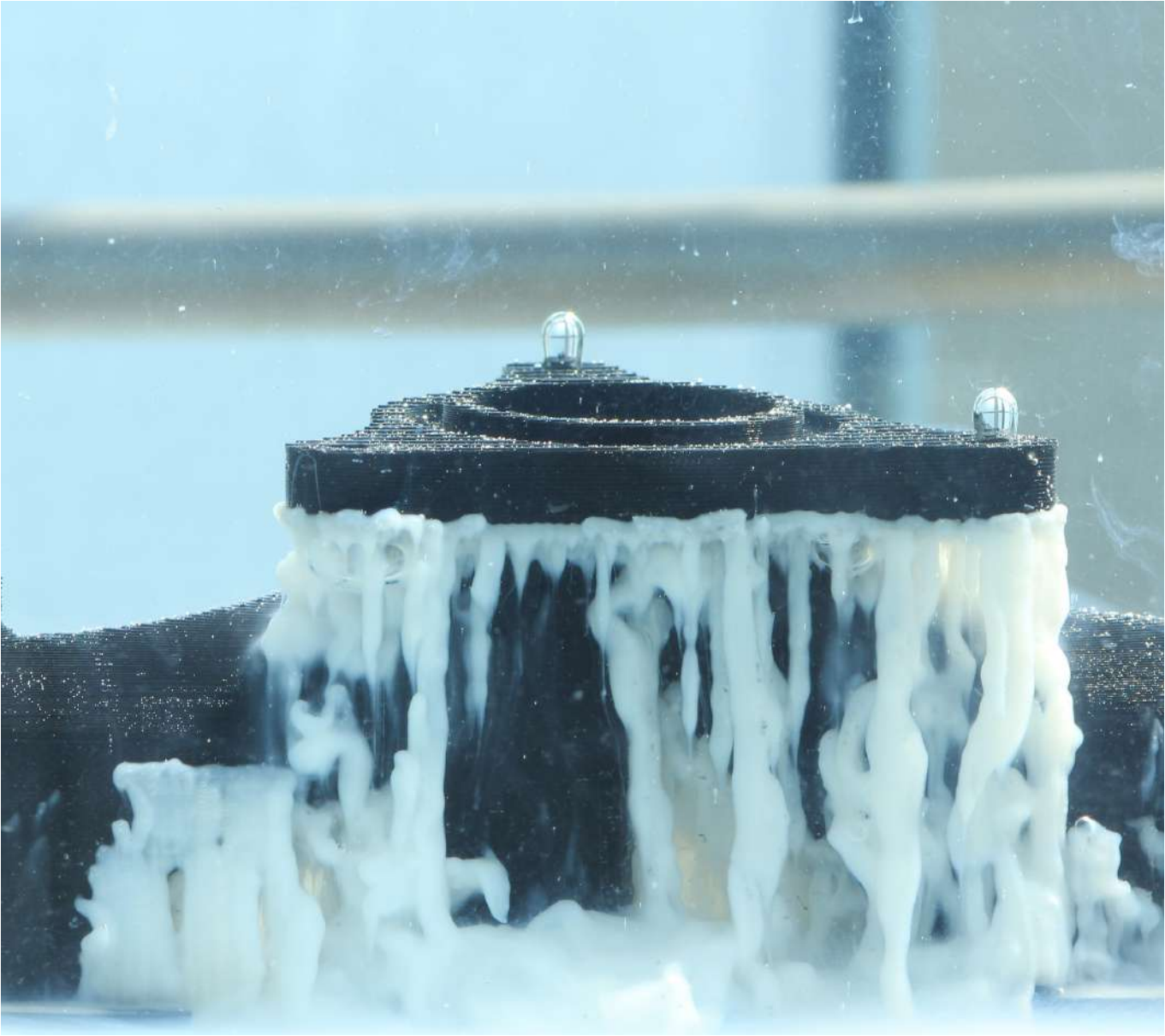
80˚C for 12h

Diameter accuracy (2.85/1.75 mm):

70%	is within	+/- 0.01
97%	is within	+/- 0.02
99%	is within	+/- 0.03
99.9%	is within	+/- 0.04

Weight accuracy:

600g	+/-	20g
750g	+/-	20g
1000g	+/-	30g
3000g	+/-	60g



PolyDissolve™

PolyDissolve™ is a family of dissolvable support filaments. This family offers support solution for our portfolio of filaments. It enables a greater design freedom.

PolyDissolve™ S1

PolyDissolve™ S1 is a water dissolvable support for PLA, TPU, PVB and Nylon based filaments from our portfolio. It is specifically engineered to have a perfect interface with these materials while also displaying good solubility.

Available colors:

Physical properties

Property	Testing method	Typical value
Density	ASTM D792 (ISO 1183, GB/T 1033)	1.37 (g/cm³ at 21.5 °C)
Melt Index	210 °C, 2.16 kg	7.8 (g/10 min)

Material Compatibility

Material	Combination
PLA based material from Polymaker's portfolio	++
PETG based material from Polymaker's portfolio	+
ABS based material from Polymaker's portfolio	--
PC based material from Polymaker's portfolio	--
PVB based material from Polymaker's portfolio	++
TPU based material from Polymaker's portfolio	++
Nylon based material from Polymaker's portfolio	++

++ : support the model very well
+: generally support the model depending on its geometry
-: generally doesn't support the model depending on its geometry
- -: do not support the model

Drying settings

80˚C for 12h

Diameter accuracy (2.85/1.75 mm):

70%	is within	+/- 0.01
97%	is within	+/- 0.02
99%	is within	+/- 0.03
99.9%	is within	+/- 0.04

Weight accuracy:

600g	+/-	20g
750g	+/-	20g
1000g	+/-	30g
3000g	+/-	60g

Specialty

This Specialty family provides unique filaments from Polymaker to unlock new 3D printing applications.

PolySmooth™

PolySmooth™ is a unique, easy-to-print filament designed for hands-free post processing. The surface can be smoothed with alcohol to achieve layer free models using the **Polysher™**.

Available colors:

Physical properties

Property	Testing method	Typical value
Density	ASTM D792 (ISO 1183, GB/T 1033)	1.08 – 1.10 (g/cm^3 at 21.5 °C)
Glass transition temperature	DSC, 10 °C/min	70 (°C)
Vicat softening temperature	ASTM D1525 (ISO 306, GB/T 1633)	70 (°C)
Melt Index	210 °C, 2.16 kg	6.6 - 6.7 (g/10 min)
Decomposition temperature	TGA, 20 °C/min	260 (°C)

Mechanical properties

Property	Testing method	Typical value
Young's modulus (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	2047 ± 111 (MPa)
Tensile strength (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	39.8 ± 0.7 (MPa)
Elongation at break (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	4.5 ± 1.4 (%)
Bending modulus	ASTM D790 (ISO 178, GB/T 9341)	1846 ± 109 (MPa)
Bending strength	ASTM D790 (ISO 178, GB/T 9341)	64.9 ± 1.2 (MPa)
Charpy impact strength	ASTM D256 (ISO 179, GB/T 1043)	9.2 ± 1.2 (kJ/m^2)

Drying settings

60˚C for 12h

Diameter accuracy (2.85/1.75 mm):

70%	is within	+/- 0.01
97%	is within	+/- 0.02
99%	is within	+/- 0.03
99.9%	is within	+/- 0.04

Weight accuracy:

600g	+/-	20g
750g	+/-	20g
1000g	+/-	30g
3000g	+/-	60g

PolyWood™

PolyWood™ is a wood mimic filament without actual wood powder, which removes all risks of nozzle clogs. **PolyWood™** is made entirely with PLA using a special foaming technology. It exhibits the same density and appearance as wood.

Available colors:

Physical properties

Property	Testing method	Typical value
Density	ASTM D792 (ISO 1183, GB/T 1033)	0.8 (g/cm3 at 21.5 °C)
Glass transition temperature	DSC, 10 °C/min	62 (°C)
Vicat softening temperature	ASTM D1525 (ISO 306, GB/T 1633)	60 (°C)
Melting temperature	DSC, 10 °C/min	151 (°C)
Crystallization temperature	DSC, 10 °C/min	116 (°C)

Mechanical properties

Property	Testing method	Typical value
Tensile strength (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	23.2 ± 0.4 (MPa)
Elongation at break (X-Y)	ASTM D638 (ISO 527, GB/T 1040)	8.2 ± 0.9 (%)
Bending modulus	ASTM D790 (ISO 178, GB/T 9341)	2607 ± 50 (MPa)
Bending strength	ASTM D790 (ISO 178, GB/T 9341)	52.9 ± 0.3 (MPa)
Charpy impact strength	ASTM D256 (ISO 179, GB/T 1043)	2.1 ± 0.2 (kJ/m2)

Drying settings

70˚C for 8h

Diameter accuracy (2.85/1.75 mm):

70%	is within	+/- 0.01
97%	is within	+/- 0.02
99%	is within	+/- 0.03
99.9%	is within	+/- 0.04

Weight accuracy:

600g	+/-	20g
750g	+/-	20g
1000g	+/-	30g
3000g	+/-	60g

PolyCast™

PolyCast™ is a filament designed to produce investment patterns for investment casting applications. 3D printing significantly cuts down both the cost and lead time by eliminating the tooling process.

Available colors:

Comparison between conventional wax-based investment casting and PolyCast™

	Conventional Investment Casting	PolyCast™ investment casting
Tooling Cost	$ 10,000 - 100,000	$ 0
Lead Time	> 5 weeks	< 2 weeks

Process Overview

1. Print

2. Polish

3. Assemble

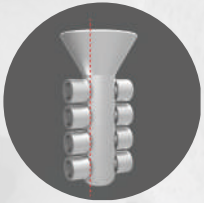
4. Build Shell

5. Sinter & Burn out

6. Gravity Pouring

7. Knock Out

8. Cut off



9. Finish castings

PolySupport™

PolySupport™ is a break away support for Polymaker PLA based filaments. It has a perfect interface with PLA, strong enough to support it and easily removable by hand.

Available colors:

Physical properties

Property	Testing method	Typical value
Density	ASTM D792 (ISO 1183, GB/T 1033)	1.22 (g/cm^3 at 21.5 °C)
Melt Index	220 °C, 2.16 kg	3-6 (g/10 min)

Material Compatibility

Material	Combination
PLA based material from Polymaker's portfolio	++
PETG based material from Polymaker's portfolio	-
ABS based material from Polymaker's portfolio	-
PC based material from Polymaker's portfolio	+
PVB based material from Polymaker's portfolio	+
TPU based material from Polymaker's portfolio	+
Nylon based material from Polymaker's portfolio	--

++ : support the model very well
+: generally support the model depending on its geometry
-: generally doesn't support the model depending on its geometry
- -: do not support the model

Drying settings

80˚C for 8h

Diameter accuracy (2.85/1.75 mm):

70%	is within	+/- 0.01
97%	is within	+/- 0.02
99%	is within	+/- 0.03
99.9%	is within	+/- 0.04

Weight accuracy:

600g	+/-	20g
750g	+/-	20g
1000g	+/-	30g
3000g	+/-	60g

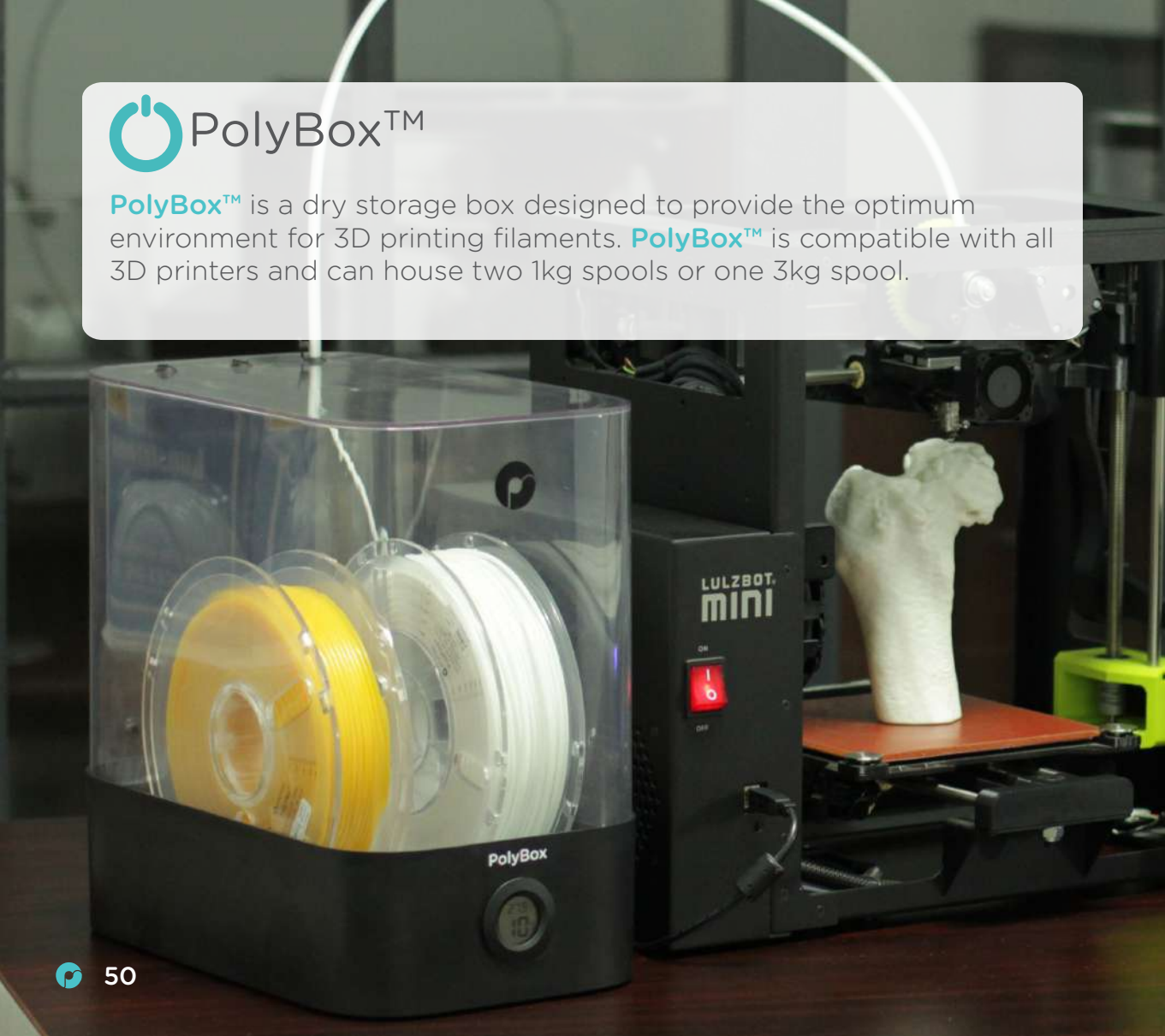

PolyBox

Hardware

Polymaker offers 3D printing accessories to optimize the user experience with their filaments.

PolyBox™

PolyBox™ is a dry storage box designed to provide the optimum environment for 3D printing filaments. **PolyBox™** is compatible with all 3D printers and can house two 1kg spools or one 3kg spool.



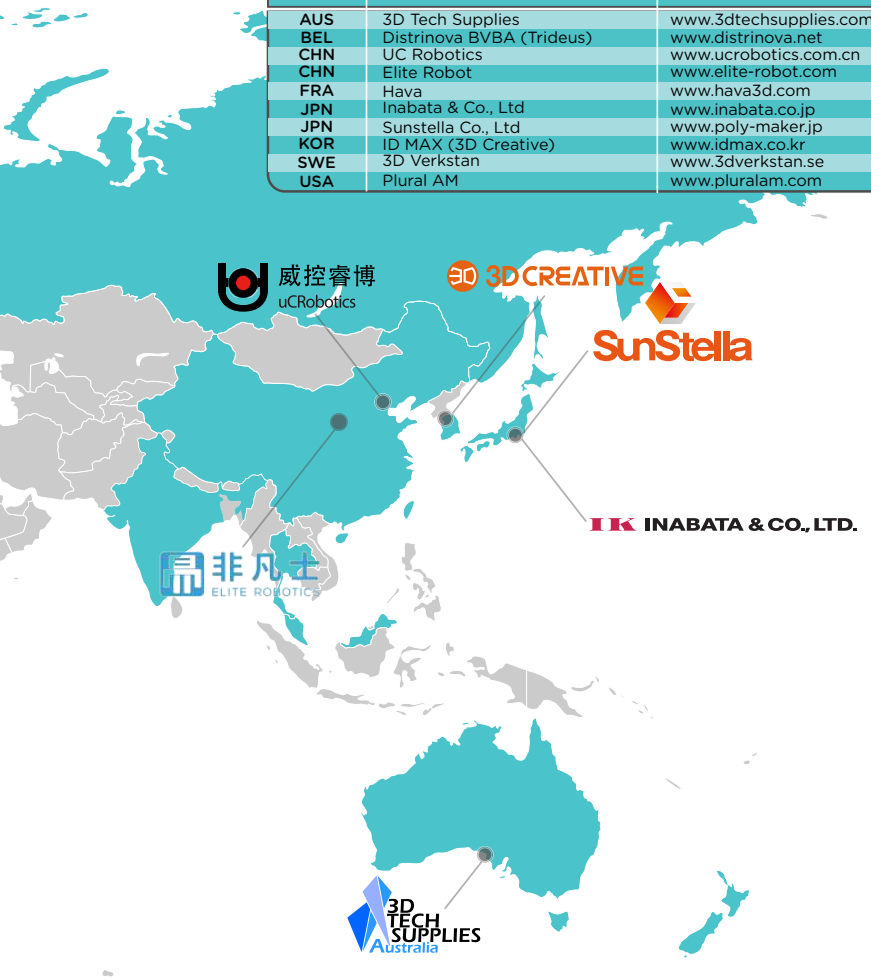
Polysher™

Polysher™ is a desktop post processing unit designed to remove layer lines from **PolySmooth™** and **PolyCast™** prints. **Polysher™** uses Polymaker's **Layer-Free™** technology to create a fine mist of alcohol which evenly smooths the model.

Worldwide

DISTRIBUTORS & COVERAGE

Country	Distributor	Website	Email
AUS	3D Tech Supplies	www.3dtechsupplies.com.au	mrt@mpsonline.com.au
BEL	Distrinova BVBA (Trideus)	www.distrinova.net	joreon@distrinova.net
CHN	UC Robotics	www.ucrobotics.com.cn	lwang@ucrobotics.com
CHN	Elite Robot	www.elite-robot.com	liwei@elite-robot.com
FRA	Hava	www.hava3d.com	emilie.damas@hava3d.com
JPN	Inabata & Co., Ltd	www.inabata.co.jp	nagasaka.tatsuro@inabata.com
JPN	Sunstella Co., Ltd	www.poly-maker.jp	info@poly-maker.jp
KOR	ID MAX (3D Creative)	www.idmax.co.kr	kapark@idmax.co.kr
SWE	3D Verkstan	www.3dverkstan.se	info@3dverkstan.se
USA	Plural AM	www.pluralam.com	info@pluralam.com



Worldwide RESELLERS

AMERICA

Country	Reseller	Website	Email
ARG	ROJO3D SRL	www.rojo3d.com	info@rojo3d.com
CAN	Filaments.ca	www.filaments.ca	info@filaments.ca
CAN	Revolution 3D Printers	www.revolution3dprinters.com	alain.desgagne@revolution3dprinters.com
CHL	3DP Chile	www.tresdp.com	fabrizio@tresdp.com
MEX	3D Market MX	www.3dmarket.mx	luis.montano@3dmarket.mx
USA	3D Platform	www.3dplatform.com	marketing@3dpunlimited.com
USA	3D Printing Tech	www.3d-printingtech.com	sales@3d-printingtech.com
USA	Hamilton 3D	www.hamilton3d.com	engineering@hamilton3d.com
USA	iMakr USA	www.imakr.com/us	wei@imakr.vc
USA	LulzBot	www.lulzbot.com	sales@lulzbot.com
USA	MAKEiT Inc.	www.makeit-3d.com	information@makeit-3d.com
USA	Maker Box	www.makerbox.me	nick@makerbox.me
USA	Makerfront	www.makerfront.com	mike@makerfront.com
USA	MakerGear	www.makergear.com	info@MakerGear.com
USA	MatterHackers	www.matterhackers.com	support@matterhackers.com
USA	MicroCenter	www.microcenter.com	microcenteronline@gmail.com
USA	PlugnPlay3d	www.plugnplay3d.com	sales@plugnplay3d.com
USA	Plural AM	www.pluralam.com	info@pluralam.com
USA	Printed Solid	www.printedsolid.com	info@printedsolid.com

ASIA and PACIFIC

Country	Reseller	Website	Email
AUS	3D Tech Supplies	www.3dprintingsolution.com.au	mrt@mpsonline.com.au
CHN	UC Robotics	www.ucrobotics.com.cn	lwang@ucrobotics.com
CHN	Elite Robot	www.elite-robot.com	liwei@elite-robot.com
HKG	Innospot Limited		timyau@innospot.hk
IND	Think 3d	www.think3d.in	info@think3d.in
IDN	Aneka 3D	www.aneka3d.com	aneka3d@gmail.com
JPN	Inabata & Co., Ltd	www.inabata.co.jp	nagasaka.tatsuro@inabata.com
JPN	Sunstella Co., Ltd	www.poly-maker.jp	info@poly-maker.jp
KOR	ID MAX	www.idmax.co.kr	kapark@idmax.co.kr
MYS	Pebble3D	www.pebblereka.com	sales@pebblereka.com
SGP	ELH TECH (S) PTE.	www.elhtech.com.sg/page/home	simon.si@elhtech.com.sg
TWN	3DMART LTD.	www.3dmart.com.tw	artem@3dmart.com.tw
THA	Makers Point	www.facebook.com/	shelley@makeit-3d.com
		MakersPoint-1054698111255233	

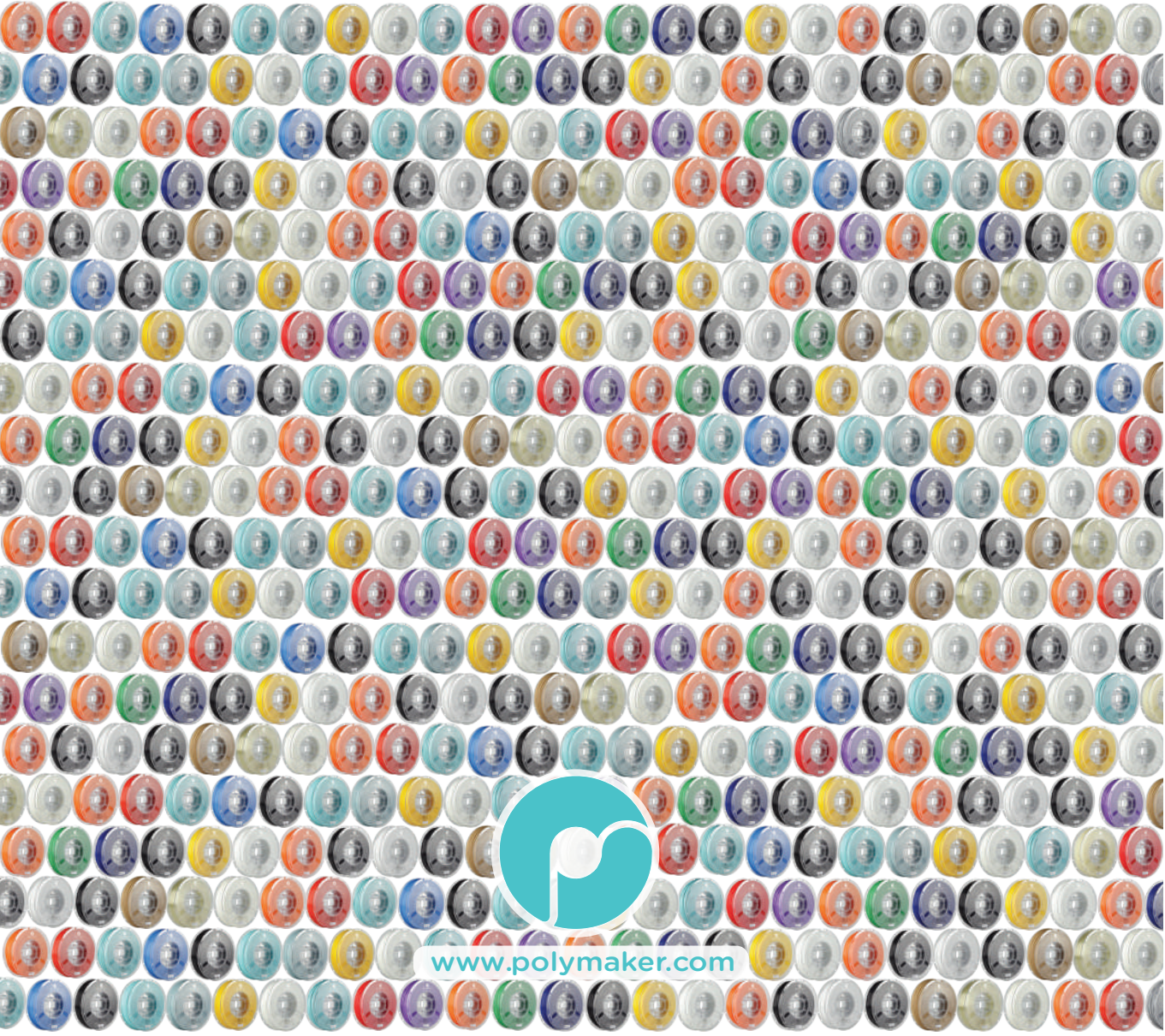
EUROPE

Country	Reseller	Website	Email
ARE	PRECISE Trading LLC	www.precise-distribution.com	s.thawaba@preciseme.com
AUT	3D Jake	www.3djake.com	office@3djake.com
BEL	Trideus	www.trideus.be	info@trideus.be
BEL	Ideal Jacobs Europe	www.buildtak.eu	igomes@buildtak.eu
BEL	3D&I	www.3d-i.be	webshop@3d-i.be
BLR	Intertechnomarket	www.itmforms.com	info@itmforms.com
BGR	ProFab ltd.	www.profab3d.com	info@profab3d.com
CHE	A + B solotions Sarl. Youmake.ch	www.youmake.ch	hello@youmake.ch
CHE	3DPrintNewTechno	www.3dprintnewtechno.ch	info@3dprintnewtechno.ch
CHE	3Dware TGS Trading GmbH	www.3dware.ch	info@3dware.ch
CZE	3Dwiser	www.3dwiser.com	info@3dwiser.com
DEU	3D Druckkaufhaus	www.3ddruckkaufhaus.de	sale@myprintoo.de
DEU	3D Jake	www.3djake.com	office@3djake.com
DEU	3Dmensionals	www.3dmensionals.de	info@3dmensionals.de
DEU	Comprise IT Systeme GmbH	www.comprise.de	info@comprise.de
DEU	Conrad	www.conrad.de	www.conrad.de/de/service/contact.html
DEU	Filamentworld	www.filamentworld.de	info@filamentworld.de
DEU	German RepRap	www.germanreprap.com	info@germanreprap.com
DEU	Kuehling & Kuehling	www.kuehlingkuehling.de	info@kuehlingkuehling.de
DEU	Makerdise	www.makerdise.de	beep@makerdise.de
DEU	OKM 3D	www.3d-drucker-experte.de	info@okm-3d.de
DNK	in2motion	www.in2motion.dk	info@in2morion.dk
ESP	3D Jake	www.3djake.com	office@3djake.com
ESP	Filament2print	www.filament2print.com	admin@filament2print.com
ESP	Impresoras3D	www.impresoras3d.com	juan@impresoras3d.com
ESP	Tecnologyk	www.tecnologyk.com	info@tecnologyk.com
FIN	3D Jake	www.3djake.com	office@3djake.com
FIN	Maker3D oy	www.3d-tulostus.fi	asiakaspalvelu@3d-tulostus.fi
FIN	Prenta Oy	www.prenta.fi	info@prenta.fi
FRA	Makershop	www.makershop.fr	info@makershop.fr
GBR	3Dfilaprint	www.3dfilaprint.com	timk@3dfilaprint.com
GBR	3D Jake	www.3djake.com	office@3djake.com
GBR	Dream3D	www.dream3d.co.uk	info@dream3d.co.uk
GBR	E3D	www.e3donline.com	support@e3donline.com
GBR	iMakr	www.imakr.com	info@imakr.com
GRC	3DHUB	www.3dhub.gr	voudas@web-plus.gr
GRC	Commonslab	www.commonslab.gr	info@commonslab.gr
ITA	3Dltaly	www.3ditaly.it	info@3ditaly.it
ITA	3D Jake	www.3djake.com	office@3djake.com
ITA	Filoprint	www.filoprint.it	info@filoprint.it
ITA	QIFactory	www.Qifactory.com	guiseppe@qifactory.com
ITA	Sharemind	www.sharemind.eu	pm@sharmind.eu
ISR	Mafil	www.mafil.co.il	info@mafil.co.il
LVA	Mass Portal	www.massportal.com	sales@massportal.com
LTU	3D Creative	www.3dcreative.it	info@3dcreative.lt
NLD	Felix Printers	www.felixprinters.com	info@felixprinters.com
NLD	Rada3D	www.rada3d.nl	info@rada3d.nl
NLD	Seeda 3D	www.3dprinters-store.com	info@seeda.nl
NLD	Turtle creations	www.turtlecreations.nl	info@turtlecreations.nl
NOR	3DNet	www.3dnet.no	info@3dnet.no
POL	3D Jake	www.3djake.com	office@3djake.com
POL	Marwiol	www.marwiol.pl	mrekawek@marwiol.pl
ROU	Formwerk	www.formwerk.ro	yba@formwerk.ro
ROU	Suntem3D	www.suntem3d.ro	informatii@suntem3d.ro
RUS	Chevalier.ru, ltd	www.mass-portal.ru	info@mass-portal.ru
SVK	Just Create	www.justcreate.sk	timothee.volpi@justcreate.sk
SVN	3D Jake	www.3djake.com	office@3djake.com
SVN	ITehLaB d.o.o.	www.3d-tisk.si	info@3d-tisk.si
TUR	Btech	www.btech.com.tr	info@btech.com.tr
ZAF	Express3D parts	www.express3dparts.co.za	info@express3dparts.co.za

Contact us

For any inquiries or technical support,
please contact: **support@polymaker.com**

The information provided in this document is intended to serve as basic guidelines on how particular product can be used. Users can adjust the printing conditions based on their needs and actual situations. It is normal for the product to be used outside of the recommended ranges of conditions. Each user is responsible for determining the safety, lawfulness, technical suitability, and disposal/recycling practices of Polymaker materials for the intended application. Polymaker makes no warranty of any kind, unless announced separately, to the fitness for any particular use or application. Polymaker shall not be made liable for any damage, injury or loss induced from the use of Polymaker materials in any particular application.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