



ESUN[®]



Product Manual

3D Printing Material

Official Website



Facebook



Twitter



Instagram



LinkedIn

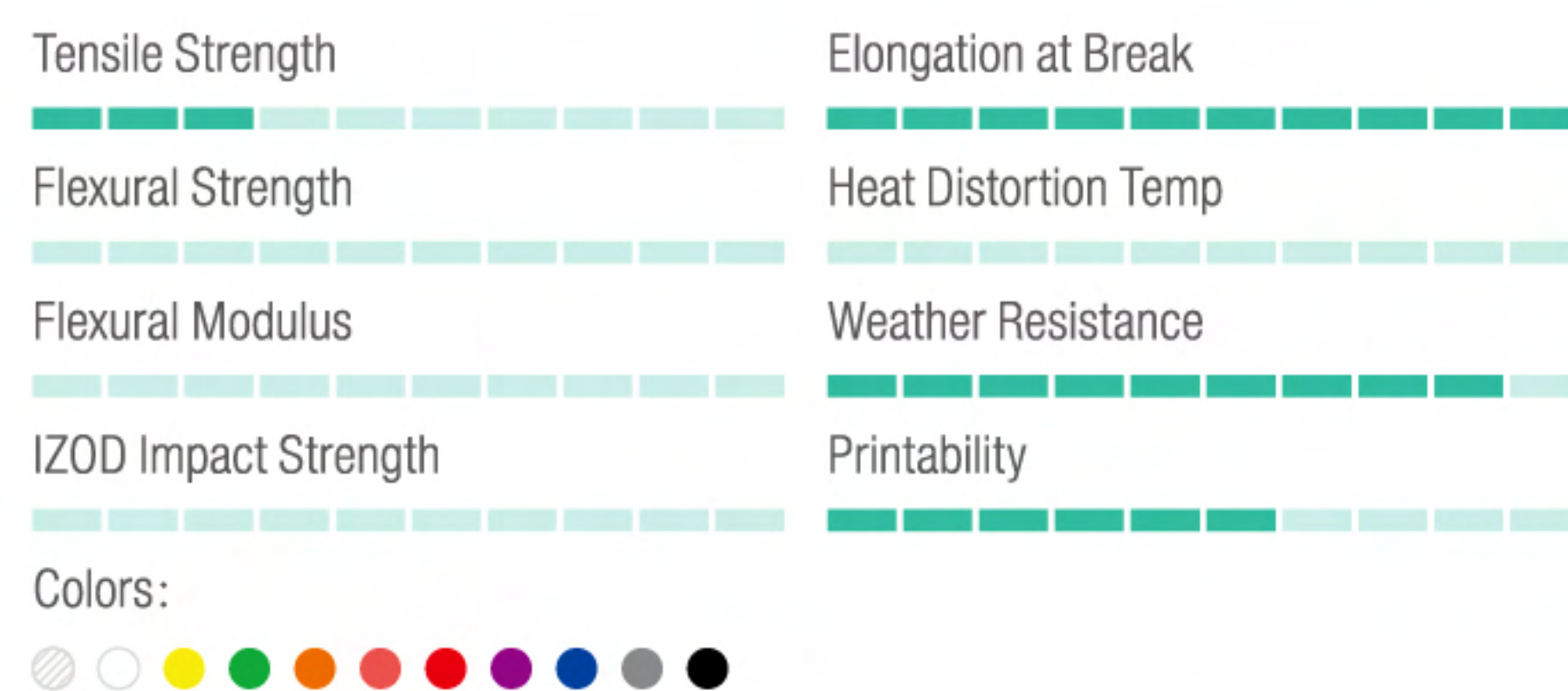


GENERAL MATERIALS



eTPU-95A

Flexible TPU filament with shore hardness of 95A. Combine flexibility, high resilience and printability. eTPU-95A has been successfully applied to 3D printing customized top cover and orthopedic insoles industry. Multiple colors are available.



eFlex_(TPU-87A)

Flexible TPU filament with shore hardness of 87A. The printed object is more flexible than TPU-95A, but stronger than eElastic. Transparent appearance.



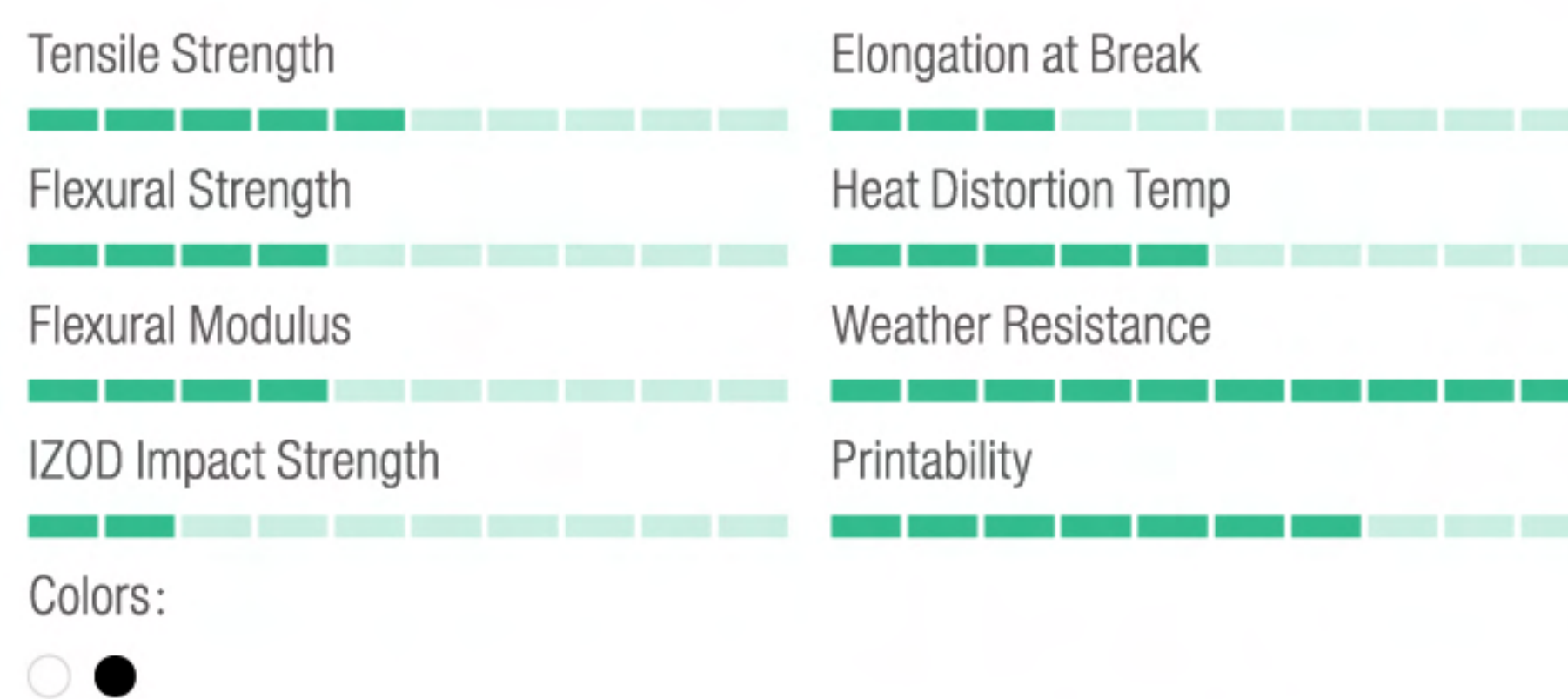
eElastic_(TPE-83A)

Flexible TPE filament with shore hardness of 83A. The printed object is more flexible than TPU-95A and eFlex. Multiple colors are available.



eASA

Has a high performance on weather and UV resistance. Ideal choice for outdoor application as its excellent UV resistance and mechanical properties



ePA

Excellent strength and toughness. Self-lubricating, wear-resistance, impact resistance and easy to print.



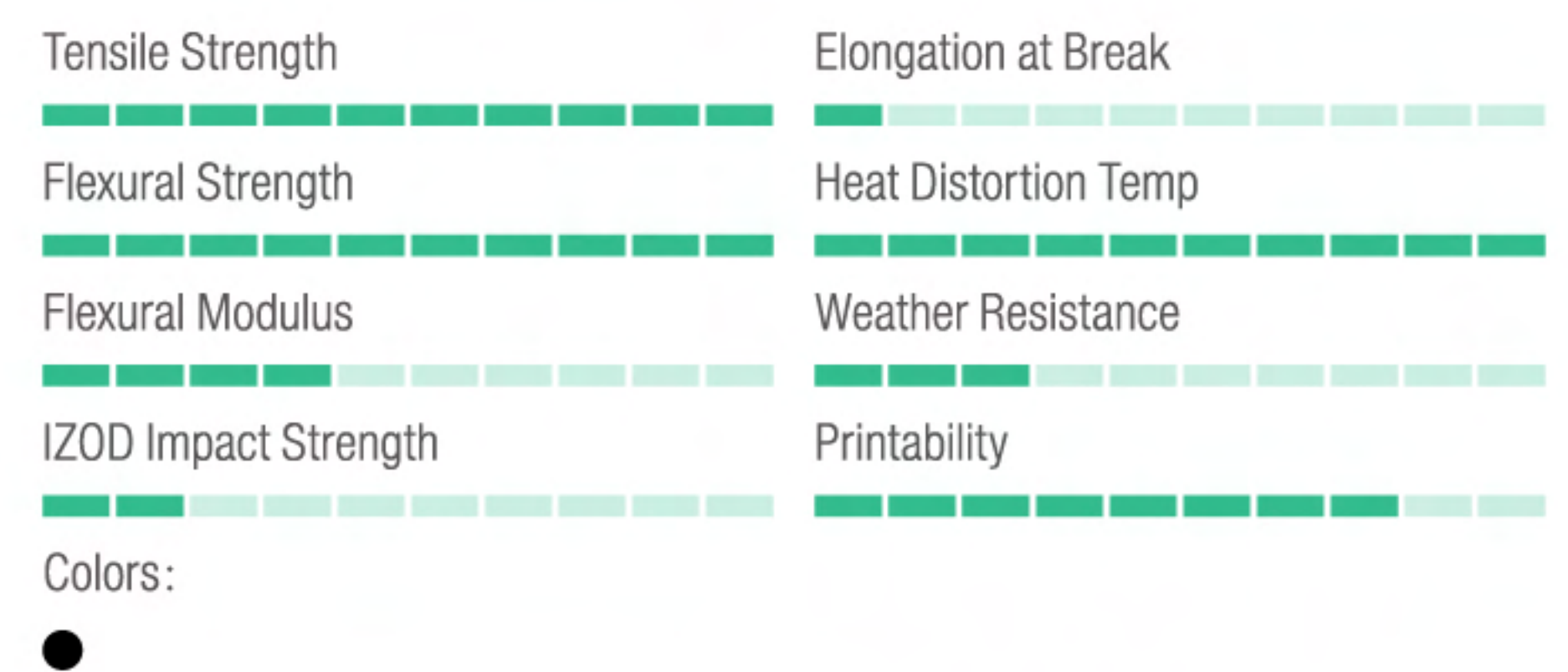
ePC

Excellent strength and toughness, impact resistance, easy to print.



ePA-CF

Carbon fiber strengthened nylon, heat distortion temp up to 155°C. Excellent strength, toughness, rigidity, self-lubricating property, wear-resistant and smooth printed surface. Applicable to lightweight application with its high strength.



ePA-GF

Glass fiber strengthened nylon, heat distortion temp up to 120°C. Excellent strength, self-lubricating and wear-resistance. Smooth printed surface.



ePEEK Pro

Excellent toughness and impact resistance. Chemical resistant, outstanding tolerance to organics, acid and alkali. Fire retardant, self-lubricating and wear-resistance. Heat distortion temp up to 205°C. Suitable for high temp FDM printer with heat chamber.

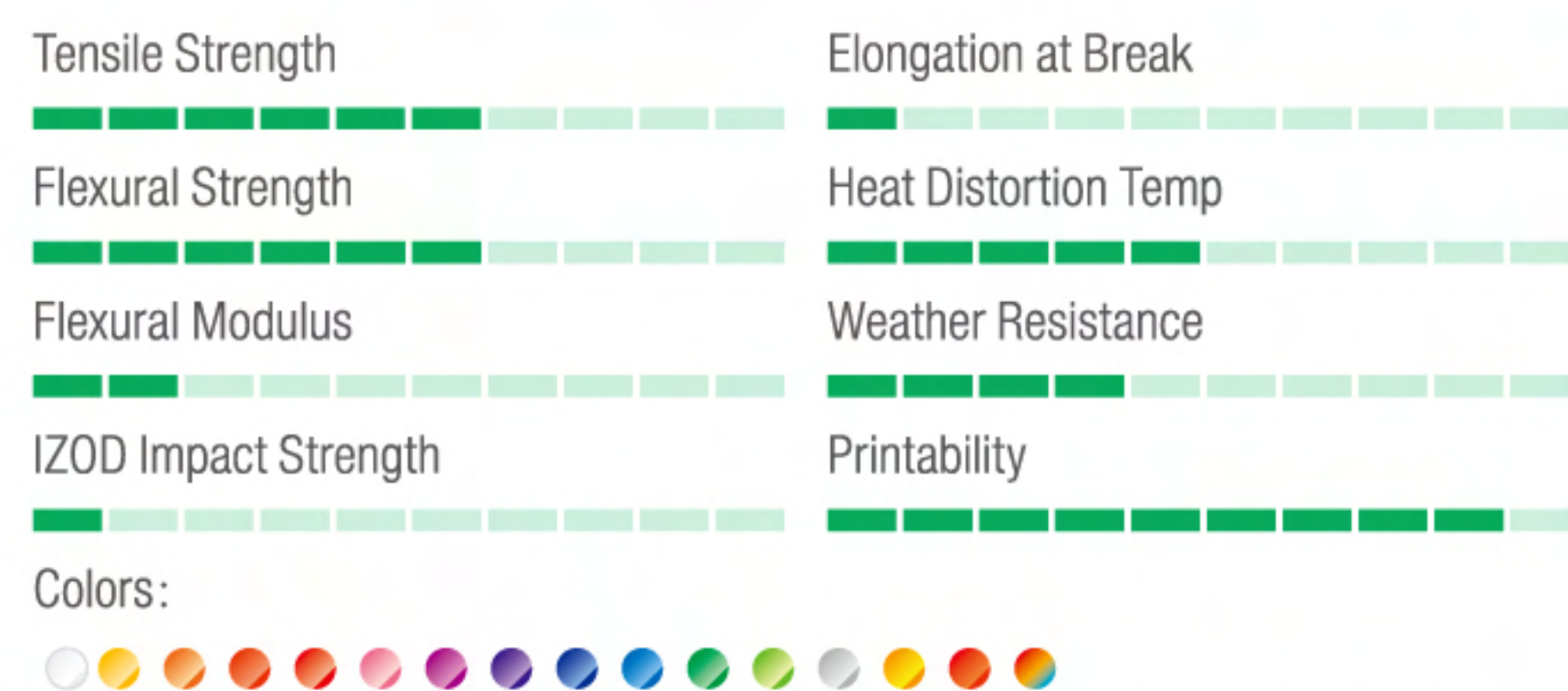
SPECIAL MATERIALS

PHOTOPOLYMER RESINS



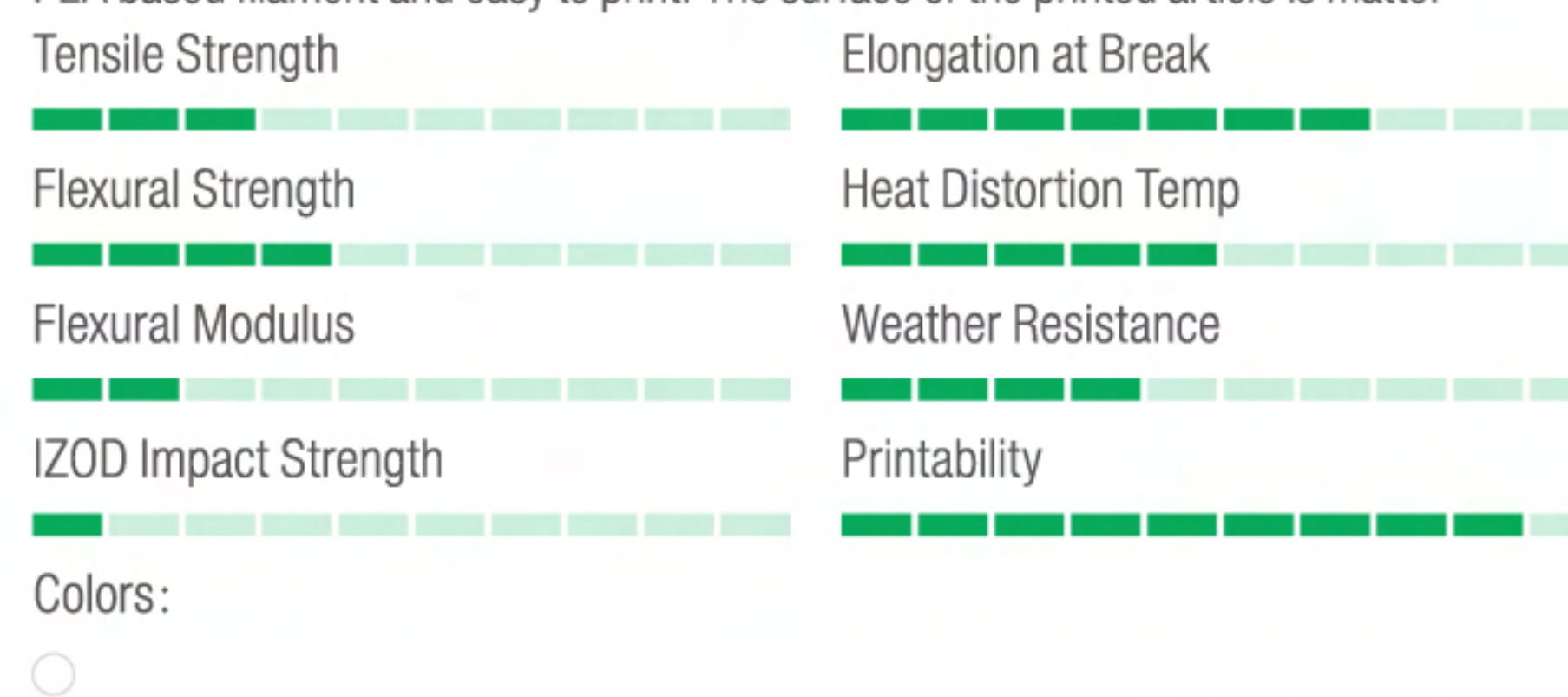
eSilk-PLA

Very shiny surface to provide silk-like appearance. Much more shiny than normal filaments. PLA based filament, eco-friendly and easy to print. Multiple colors are available.



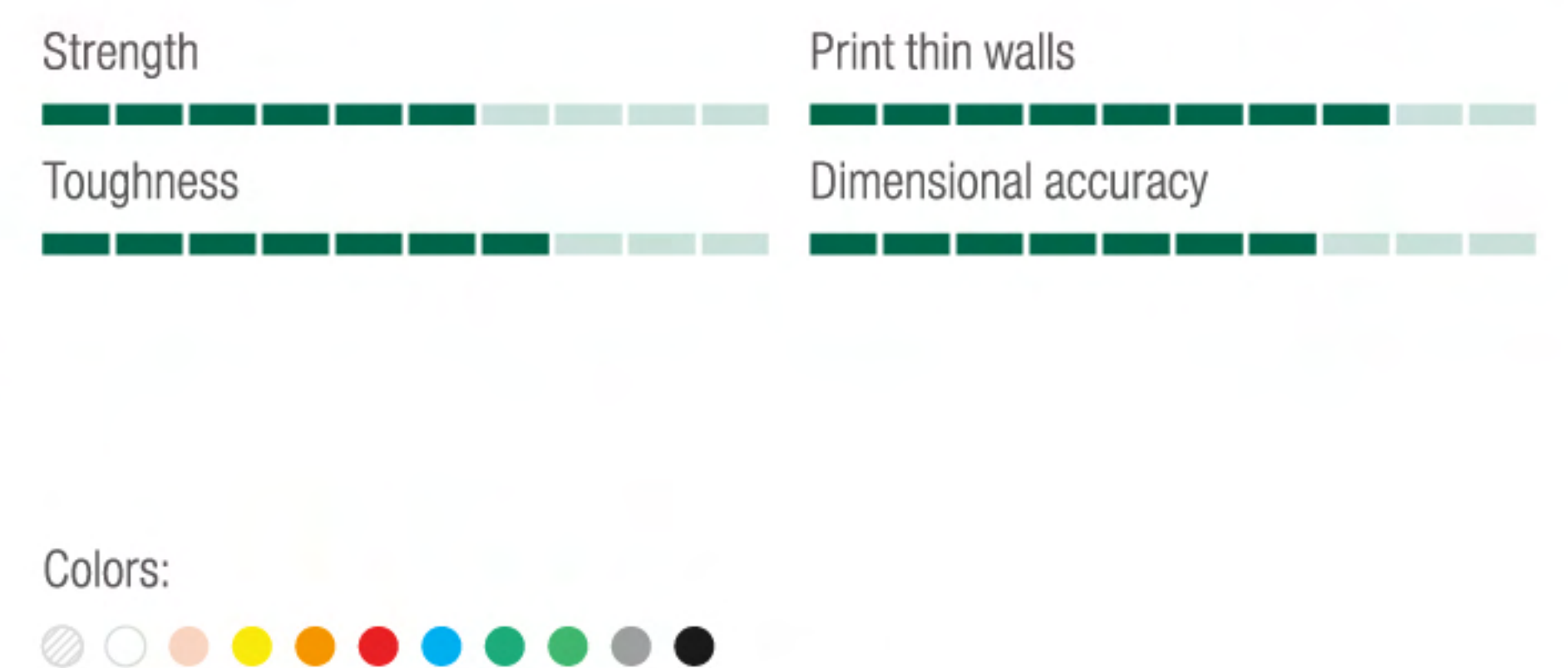
ePLA-LW

The density is low after printing, can be as low as 0.54g/cm³. Foam volume magnification can be reached 220%. One volume of ePLA-LW is equivalent to 2.2 volumes of ordinary PLA. Strength and foaming rate can be adjusted freely. Good inter layer bonding force, the model is easy to repair after broken. Easy to paint, surface pigment adhesion is strong. PLA based filament and easy to print. The surface of the printed article is matte.



eResin-PLA

Base material comes from plant extract PLA. It makes the product be in more reliable and stable quality. EN71-3 certified. Low smell. Printed object is in good toughness and drillable. High precision, smooth surface. Wide variety of colors are available.



Wood

Imitating wood-like material. Adopting foaming technology, lightweight and low-density 0.7g/cm³. PLA based filament, eco-friendly and easy to print. The surface of the printed object is matte.



eTwinkling

PLA based filament with twinkling powder filled in. The printed object has a twinkling appearance. PLA based filament, eco-friendly and easy to print. Multiple colors available.



eMarble

Imitating marble sense material. The printed object looks like being carved out of real marble stone. Eco-friendly and easy to print.



e4D-1

Shape memory material. Can change, fix and restore the shape. PLA based filament, eco-friendly and easy to print.



Standard Resin

High rigidity, good molding accuracy, easy to print thin-walled part, smooth printed surface, wide variety of colors.



Hard-Tough Resin

ABS like resin, strong and tough. Can be used for engineering. Much higher impact resistance than normal resins. Excellent mechanical properties. Printed object is tough and mechanically drillable.

PHOTOPOLYMER RESINS



eResin-PLA Pro

Base material comes from plant extract PLA. Excellent balance of strength and toughness. High Precision, highly detailed printed object. High compatibility, suitable for color and mono screen, large and small size printers.



Colors:



Precision Model Resin

Excellent high-precision printing resin. The printed object is in higher details than printed with other types of resin. Good for printing anime model.



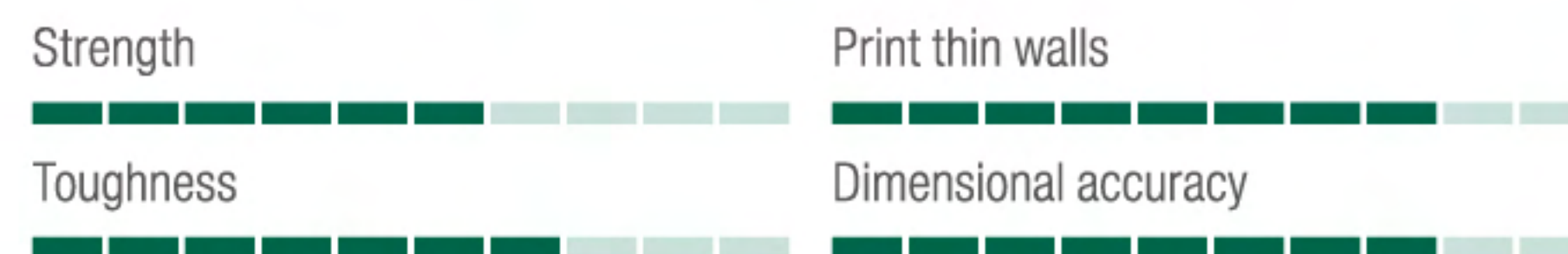
Dental Model Resin

Special for printing dental model. No deformation during modeling, smooth surface, high precision. Good strength and toughness.



eResin-WS Pro

High compatibility, suitable for mono and color screens. Can be washed with water, eliminating the need for alcohol cleaning steps. High precision, with smooth surface and clearly visible details. The mechanical properties such as strength, toughness and rigidity are balanced. Low viscosity, easy to print.



Colors:



Castable Resin for Dental

Special for dental casting. High precision, smooth surface. Ash free, great casting performance. High hardness, resistance to shock, low volume shrinkage.



Castable Resin for Jewelry

Special for jewelry casting. High precision, Smooth surface. Ash free, great casting performance. Stable size after printing. Fine toughness, no crack after curing.



eResin-PMMA Like

High transparency and anti-yellowing. The visual effect is similar to transparent thermoplastic such as PMMA. Excellent transparency after post-processing (polishing, spraying UV high-transmitting oil). Low release force, good molding accuracy, with imitation of acrylic and glass appearance. Can print transparent models with high definition and fine details.



Colors:



High Temp Resin

Excellent heat resistance. Long time 100°C heat resistance. Good mechanical strength, toughness and printing precision.



eResin-Elastic

The printed product has flexibility, low hardness, good elasticity, tear resistance, bending resistance, and high elongation at break. Low viscosity, relatively high release success rate. The printed product has smooth surface.

3D PRINTING ACCESSORIES



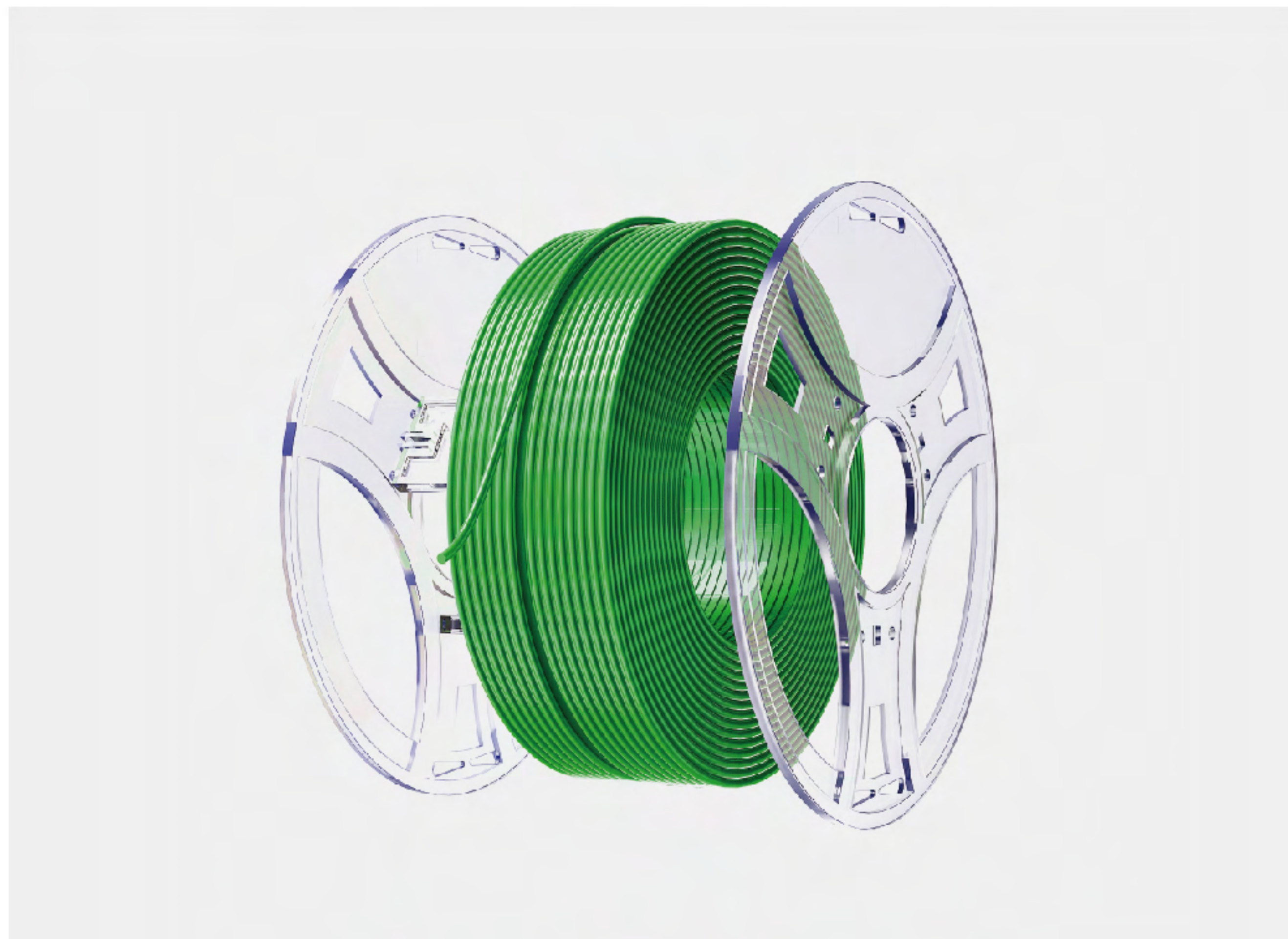
eWashCure BOX

Dual functions of cleaning and curing.
Wireless power transmission, uniform curing and strong compatibility.



eBOX Lite

Heating and drying, quiet and high efficiency, moisture-proof and dust-proof.



eSpool+Refilament

eSUN eSpool and eSUN refilament used together to reduce the usage of plastic spools to meet the needs of global plastic bans and low-carbon environmental protection. eSpool adopts the piece body buckle design. It's space-saving, reusable, convenient disassembly and assembly.



eVacuum Kit

Used to store filament in dry and vacuum environment. Moisture-proof and dust-proof. Can be reused for multiple times. Compatible with 0.5/0.75/1kg filament.

3D PRINTING FILAMENT PROPERTIES TABLE



3D Printing Filament	ePLA	PLA	PLA+	ePLA-ST	eSilk-PLA	eTwinkling	eMarble	Wood	PVA	PETG	ABS	ABS+	ABS Odorless	eABS-Max	HIPS
Density(g/cm ³)	1.26	1.2	1.23	1.25	1.21	1.41	1.24	0.7	1.25	1.27	1.04	1.06	1.04	1.05	1.05
Heat Distortion Temp(°C,0.45MPa)	56.70	53	53	52	50	67	/	45	/	64	78	73	73	85	80
Melt Flow Index(g/10min)	3.3(190°C /2.16kg)	3.5(190°C /2.16kg)	5(190°C /2.16kg)	3.2(190°C /2.16kg)	4.8(190°C /2.16kg)	2.5(190°C /2.16kg)	/	17(190°C /2.16kg)	/	20(250°C /2.16kg)	12(220°C /10kg)	15(220°C /10kg)	26.7(220°C /10kg)	60(220°C /10kg)	3(200°C /5kg)
Tensile Strength(MPa)	64.51	72	63	34.3	52	58	53	/	22	52.2	43	40	46.8	45	27
Elongation at Break(%)	31.54	11.8	20	90	14.4	/	/	/	360	83	22	30	24.4	30	55
Bending Strength(MPa)	68.99	90	74	43	65	70	/	/	/	58.1	66	68	54.9	58	39
Flexural Modulus(MPa)	1514.78	1915	1973	1477	1447	2100	/	/	/	1073	1177	1203	1234	2400	2280
IZOD Impact Strength(kJ/m ²)	7.9	5.4	9	63	5.86	4	/	/	/	4.7	29	42	24.3	48	11
Weather Resistance	4/10	4/10	4/10	4/10	4/10	4/10	4/10	4/10	7/10	8/10	8/10	8/10	8/10	8/10	7/10
Printability	9/10	9/10	9/10	9/10	9/10	9/10	9/10	9/10	5/10	9/10	8/10	8/10	8/10	8/10	6/10
Print Temp(°C)	190-230	190-230	210-230	200-230	190-230	200-230	190-230	210-230	180-230	230-250	230-270	230-270	240-250	240-270	230-270
Bed Temp(°C)	60	45-60	45-60	45-60	45-60	45-60	45-60	45-60	45-60	75-90	95-110	95-110	95-110	95-110	100-115
Fan Speed(%)	100	100	100	100	100	100	100	100	100	100	0	0	0-15	0	0
Print Speed(mm/s)	40-100	40-100	40-100	40-100	40-100	40-100	40-100	40-100	20-50	40-100	40-100	40-100	40-100	40-100	40-100
Heat Bed	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Optional	Required	Required	Required	Required	Required	Required	Required
Flexibility	—	—	—	—	—	—	—	—	✓	—	—	—	—	—	—
Elasticity	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Impact Resistance	—	—	✓	✓	—	—	—	—	—	—	✓	✓	✓	✓	✓
Soft	—	—	—	—	—	—	—	—	✓	—	—	—	—	—	—
Complex	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
UV Resistance	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Waterproof	—	—	—	—	—	—	—	—	—	✓	—	—	—	—	—
Solubility	—	—	—	—	—	—	—	—	✓	—	—	—	—	—	✓
Heat Resistance	—	—	—	—	—	—	—	—	—	—	✓	✓	✓	✓	✓
Chemical Resistance	—	—	—	—	—	—	—	—	—	✓	—	—	—	—	—
Fatigue Resistance	—	—	—	—	—	—	—	—	✓	✓	—	—	—	—	—
Need to dry	—	—	—	—	—	—	—	—	✓	—	—	—	—	✓	—
Need a heat bed	—	—	—	—	—	—	—	—	✓	✓	✓	✓	✓	✓	✓

3D PRINTING PHOTOPOLYMER RESIN PROPERTIES TABLE

3D Printing Photopolymer Resin	eResin-PLA	eResin-PLA Pro	Standard Resin	Water Washable Resin	eResin-WS Pro	Hard-Tough Resin	Precision Model Resin	eResin-WSPR	Dental Model Resin	Castable Resin for Dental	Castable Resin for Jewelry
Viscosity(mPa-s)	100-270	200-300	170-200	110-180	90-150	200-300	170-270	140-160	150-300	100-150	100-150
Density(g/cm ³)	1.07-1.10	1.09-1.10	1.08-1.13	1.10-1.14	1.11-1.13	1.08-1.12	1.13-1.16	1.11-1.12	1.05-1.25	1.05-1.12	1.05-1.12
Tensile Strength(MPa)	24-55	37-48	46-67	19-46	28-52	30-60	36-62	25-35	42-62	42-62	42-62
Elongation at Break(%)	24-37	25-28	28-36	17-30	23-29	35-52	25-40	20-35	10-20	11-20	11-20
Flexural Strength(MPa)	25-61	36-49	46-72	15-50	34-47	30-75	39-63	30-42	59-70	49-58	49-58
IZOD Impact Strength(J/m)	27-40	32-36	14-42	37-97	33-39	40-110	30-40	35-40	44-49	44-49	44-49
Surface Hardness(Shore D)	75-82	78-80	78-82	74-82	77-83	75-81	81-86	80	80	80	60
Strength	6	6	8	6	6	8	6	6	8	8	8
Toughness	7	7	7	7	7	9	7	7	7	7	7
Print Thin Walls	8	8	9	8	8	8	7	8	8	9	9
Dimensional Accuracy	7	9	7	8	8	7	9	9	8	8	8
Print Speed	8	6	8	8	2	8	7	2	8	4	4

3D PRINTING FILAMENT / 3D PRINTING RESIN ARE CERTIFIED BY REACH, ROHS, ETC.

(Specification of filaments: 1.75mm / 2.85mm)

3D Printing Filament	eLastic(TPE-83A)	eFlex(TPU-87A)	eTPU-95A	ePA	ePA-CF	ePA-GF	ePA12-CF	ePAHT-CF	ePC	eASA	ePEEK Pro	eMate	ePLA-LW	e4D-1	eClean
Density(g/cm³)	1.14	1.12	1.21	1.12	1.24	1.35	1.24	1.4	1.12	1	1.3	1.16	1.2	1.23	0.95
Heat Distortion Temp(°C,0.45MPa)	/	/	/	50	155	120	94.1	190	80	54	205	45	53	/	45
Melt Flow Index(g/10min)	/	/	1.2(190°C /2.16Kg)	12.3(230°C /2.16kg)	11.46(275°C /5Kg)	1.45(220°C /2.16Kg)	8.91(270°C /2.16kg)	19.68(270°C /2.16kg)	19.5(300°C /1.2kg)	10-15(220°C /10kg)	14.3(190°C /2.16kg)	0.5(70°C /2.16kg)	8.1(190°C /2.16kg)	5.8(200°C /2.16Kg)	/
Tensile Strength(MPa)	32	52	35	52.45	140	76.93	108.18	173.37	54.88	50	/	18	32.2	48.89	23
Elongation at Break(%)	420	500	>800	175.32	10.61	21.07	9.02	8.93	150.24	30	30	>800	68.9	168.83	580
Bending Strength(MPa)	/	/	/	58	140	77.75	116.58	171.64	63.41	35	/	13	41.31	49.45	/
Flexural Modulus(MPa)	/	/	/	1370	4363	1714.63	3335	5612.41	1073	4300	/	345	1701	1302.4	/
IZOD Impact Strength(kJ/m²)	/	/	/	18.4	18.67	14.68	11.33	12.74	13.2	19	/	Don't break	8.58	7.5	29
Weather Resistance	9/10	9/10	9/10	10/10	3/10	3/10	3/10	3/10	10/10	10/10	10/10	10/10	4/10	4/10	4/10
Printability	6/10	6/10	6/10	8/10	8/10	8/10	8/10	8/10	6/10	7/10	6/10	6/10	9/10	9/10	/
Print Temp(°C)	220-250	220-250	220-250	250-290	260-300	270-300	280-300	260-300	240-270	240-270	400-450	70-100	190-270	200-230	160-300
Bed Temp(°C)	45-60	45-60	45-60	70-90	45-60	45-60	45-60	45-60	80-120	90-110	130	0	45-60	45-60	—
Fan Speed(%)	100	100	100	0	0	0	0	0	0	0	0	100	100	100	—
Print Speed(mm/s)	20-50	20-50	20-50	40-100	40-100	40-100	40-100	40-100	20-50	40-100	40-60	10-20	40-100	40-50	—
Heat Bed	Optional	Optional	Optional	Required	Optional	Optional	Optional	Optional	Required	Required	Required	—	Optional	Optional	—
Flexibility	✓	✓	✓	✓	—	—	—	—	—	—	—	✓	—	—	—
Elasticity	✓	✓	✓	—	—	—	—	—	—	—	—	✓	—	—	—
Impact Resistance	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	—	✓	—	—	—
Soft	✓	✓	✓	—	—	—	—	—	—	—	—	✓	—	—	—
Complex	—	—	—	—	✓	✓	✓	✓	—	—	—	—	—	—	—
UV Resistance	—	—	—	—	—	—	—	—	—	✓	✓	—	—	—	—
Waterproof	—	—	—	—	—	—	—	—	—	—	✓	—	—	—	—
Solubility	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Heat Resistance	—	—	—	—	✓	✓	✓	✓	✓	—	✓	—	—	—	—
Chemical Resistance	—	—	—	—	—	—	✓	✓	—	—	✓	—	—	—	—
Fatigue Resistance	✓	✓	✓	✓	—	—	—	—	✓	—	✓	—	—	—	—
Need to dry	—	—	—	✓	✓	✓	✓	✓	✓	—	✓	—	—	—	—
Need a heat bed	—	—	—	✓	—	—	—	—	✓	✓	✓	✓	—	—	✓

(Specification of resins: 500ml / 1000ml)

3D Printing Photopolymer Resin	eResin-Flex	eResin-Elastic	eResin-PMMA LIKE	High Temp Resin (100°C)	
Viscosity(mPa-s)	600-1400	500-900	300	180-220	Attention: 1. The above parameters are for reference only. The performance of the cured material is affected by factors such as equipment, environment, parameter settings, post-processing methods, detection methods, etc. Thus will cause big differences. Please contact us if necessary. 2. Shake the resin well before using. Recycle the resin after printing. Avoid long time soaking the printed object in the cleaning agent. 3. Recommend not to add other ingredients or mix them to the resin to avoid printing failure or other problems. 4. The resin should be stored in a cool, dark place, sealed with a light-tight container. 5. The raw materials of light-curing resin are chemicals, which have certain odor and skin irritation. Pay attention to protection during transportation and using. If the resin accidentally touch the skin or eyes, please rinse with plenty of water. The skin can be cleaned with detergent, decontamination powder, etc. If the allergic reaction is severe or the resin even enter the mouth or nasal cavity, please seek medical attention immediately.
Density(g/cm³)	1.02-1.05	1.08-1.10	1.05-1.15	1.09-1.10	
Tensile Strength(MPa)	4-10	4-5	58	70-85	
Elongation at Break(%)	100-350	250-350	10	35-40	
Flexural Strength(MPa)	/	/	30	95-105	
IZOD Impact Strength(J/m)	/	/	15	/	
Surface Hardness(Shore D)	60-90A	70A	70	82-84	
Strength	2	2	6	10	
Toughness	10	10	6	8	
Print Thin Walls	4	4	8	8	
Dimensional Accuracy	6	6	8	7	
Print Speed	4	2	4	8	