

Stereolithography Materials

XYZprinting offers a variety of UV curable resins for various applications.

The material guide provides the overview of the material properties for you to choose between the resins according to your needs and wants.

Resin Product	Standard Resin			Flexible Resin	Castable Resin		Rigid Resin		Tough Resin	Heat Resistant Resin
Resin Model	A1	E1	E2	B1	C1	F1	D1	D3	D2	K1
Typical Use	For general purpose prototyping and visual models.			For prototypes of handles, gaskets.	For lost-wax casting of fashion accessories.	For lost-wax casting of intricate jewelry designs.	For functional prototypes that require high stiffness.		For functional prototypes that will go under high impact or cyclic loading, snap-fit assemblies.	For models for rubber molds.
Available Colors	Clear / White / Magenta /Blue / Grey	Clear/Purple	Grey	Clear	Orange	Yellow	Clear	Orange	Clear green	Dark green
Viscosity @25°C	750-950	190-310	450-750	360-560	300-500	150-300	450-750	450-750	150-250	880-980
Density (g/cm³)	1.12-1.14	1.0-1.2	1.11-1.15	1.1-1.3	1.10-1.12	1.0-1.2	1.11-1.15	1.11-1.15	1.1-1.2	1.13-1.18
Hardness Shore D	70-90	70-90	70-90	45-65 (Shore A)	35-55	55-75	70-90	70-90	60-80	65-85
Tensile Strength (MPa) ASTM D638	35-40	20-25	25-35	0.6-1.2	--	--	40-50	35-45	35-45	30-35
Tensile Modulus (MPa) ASTM D638	1300-1600	1600-1900	800-1100	2-4	--	--	1700-2000	1400-1700	1200-1500	1100-1400
Elongation ASTM D638	3-7%	0.1-1%	6-10%	25-35%	--	--	3-7%	3-7%	20-30%	0.5-5.5%
Flexural Strength (MPa) ASTM D790	70-90	35-45	55-65	--	--	--	70-90	60-70	40-50	65-75
Flexural Modulus (MPa) ASTM D790	1800-2100	2000-2300	1400-1700	--	--	--	1800-2100	1500-1800	800-1100	1650-1950
Notched Izod Impact (J/m) ASTM D256	25-30	15-20	27-32	--	--	--	22-27	25-30	40-45	15-20
HDT (°C @0.45MPa) ASTM D648	--	--	--	--	--	--	--	--	--	110-150
Compatible Printer	Nobel 1.0 Nobel 1.0A	Nobel Superfine	Nobel Superfine	Nobel 1.0 Nobel 1.0A	Nobel 1.0A	Nobel 1.0A Nobel Superfine	Nobel 1.0A	Nobel Superfine	Nobel 1.0A	Nobel Superfine

Notes:
 Technical specifications are subject to change without notice.
 Data was obtained from parts post-cured following XYZprinting standard curing settings.
 The performance of resin materials may vary according to part geometry, printing conditions, or applications.