TecSol3D

3DSYSTEMS

PROJET® MJP 5500X

Composite multi-material 3D printer

ProJet MJP 5500X

Printing Modes HD Mode UHD Mode UHDS Mode XHD Mode XHDS Mode	 High Definition Ultra High Definition Ultra High Definition-Single Xtreme High Definition Xtreme High Definition-Single
Net Build Volume (xyz)*	20.4 x 15 x 11.8 in (518 x 381 x 300 mm)
Resolution (xyz) HD Mode UHD Mode UHDS Mode XHD Mode XHDS Mode	 375 x 375 x 1000 DPI; 25 µ layers 600 x 600 x 1600 DPI; 16 µ layers 600 x 600 x 1600 DPI; 16 µ layers 750 x 750 x 2000 DPI; 13 µ layers 750 x 750 x 2000 DPI; 13 µ layers
Accuracy *(typical)*	±0.001-0.002 inch per inch (0.025-0.05 mm per 25.4 mm) of part dimension. Accuracy may vary depending on build parameters, part geometry and size, part orientation, and post-processing.
Build Materials VisiJet CR-CL VisiJet CR-WT VisiJet CE-BK VisiJet CE-NT	 Rigid Plastic Clear Rigid Plastic White Elastomeric Black Elastomeric Natural
Support Material	VisiJet S500 non-toxic wax material for hands- free melt-away supports
Material Packaging	Build and support materials in clean 4.41 lbs (2 kg) bottles (printer holds 4 build and 4 support bottles with auto-switching)
Electrical	100 VAC, 50/60 Hz, single-phase, 15 Amps 115 VAC, 50/60 Hz, single-phase, 15 Amps 240 VAC, 50/60 Hz, single-phase, 8 Amps
Dimensions (WxDxH) 3D Printer Crated 3D Printer Uncrated	 80 x 48 x 78 in (2032 x 1219 x 1981 mm) 67 x 35.4 x 65 in (1700 x 900 x 1650 mm)
Weight 3D Printer Crated 3D Printer Uncrated	 2550 lbs (1157 kg) 2060 lbs (934 kg)
3DSPRINT™ Software	Easy build job set-up, submission and job queue management; Automatic part placement and build optimization tools; Part stacking and nesting capability; Extensive part editing tools; Automatic support generation; Job statistics reporting tools
E-mail Notice Capability	Yes
Network Compatibility	Network ready with 10/100 Ethernet interface
Client Hardware Recommendation	1.7 GHz or better with 4GB RAM OpenGL 1.1 Compatible 1280x1024 resolution or better
Client Operating System	Windows® 7, Windows 8 or Windows 8.1 (Service Pack)
Input Data File Formats Supported	STL and CTL
Post-Processing	ProJet Finisher XL for easy removal of eco-friendly wax supports
Operating Temperature Range	64-82 ºF (18-28 ºC)
Noise	< 65 dBa estimated (at medium fan setting)
5-Year Printhead Warranty	Standard
Certifications	CE

* Maximum part size is dependent on geometry, among other factors.

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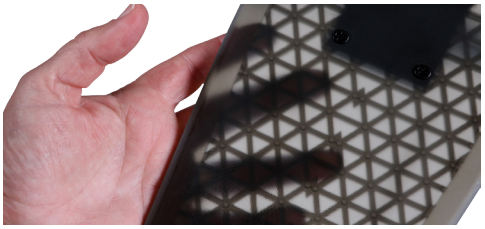
VISIJET® BASE MATERIALS FOR THE PROJET MJP 5500X

The VisiJet composite family of materials is precisely mixed by the ProJet MJP 5500X print head on-the-fly to achieve superior mechanical properties and custom performance characteristics to meet your exacting specifications. This ingenuous system simultaneously prints and blends together flexible and rigid material composites, layer-by-layer at the pixel level, in a variety of colors and shades including opaque, clear, black or white and numerous shades of gray.








Properties	Condition	VisiJet CR-WT	VisiJet CR-CL	VisiJet CE-NT	VisiJet CE-BK
Composition		UV curable plastic	UV curable plastic	UV curable elastomeric material	UV curable elastomeric material
Description		Rigid ABS-like	Rigid Polycarbonate-like	Elastomeric	Elastomeric
Color		Opaque White	Translucent Clear	Translucent Natural	Opaque Black
Bottle Quantity		2 kg	2 kg	2 kg	2 kg
Solid Density		1.18 g/cm^3	1.18 g/cm^3	1.12 g/cm^3	1.12 g/cm^3
Tensile Strength	ASTM D638	37-47 MPa	37-47 MPa	0.2-0.4 MPa	0.2-0.4 MPa
Tensile Modulus	ASTM D638	1000-1600 MPa	1000-1600 MPa	0.27-0.43 MPa	0.27-0.43 MPa
Elongation at Break	ASTM D638	7-16 %	7-16 %	160-230 %	160-230 %
Flexural Strength	ASTM D790	61-72 MPa	61-72 MPa	N/A	N/A
Flexural Modulus	ASTM D790	1400-2000 MPa	1400-2000 MPa	N/A	N/A
Impact Strength (Notched Izod)	ASTM D256	16-19 J/m	16-19 J/m	N/A	N/A
Shore A Hardness	ASTM 2240	N/A	N/A	27-33	27-33
Shore D Hardness	ASTM 2241	76-80	76-80	N/A	N/A
Water Absorption	ASTM D570 24 hr	0.5%	0.5%	0.9%	0.6%
Heat Distortion Temperature	D648 @ 0.45 MPa	46 °C	46 °C	N/A	N/A
Heat Distortion Temperature	D648 @ 1.82 MPa	41°C	41 °C	N/A	N/A
Tear Resistance	ASTM D624	N/A	N/A	3.1 - 3.7 kN/m	3.1 - 3.7 kN/m

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VISIJET® COMPOSITE COMBINATIONS FOR THE PROJET MJP 5500X

In addition to printing in pure base materials, the ProJet MJP 5500X can mix any two base materials together pixel-by-pixel to achieve your targeted properties, in up to twelve different composite ratios. An entire object can be printed in any of these composites, or a user can easily select a specific region of a part to be any number of different material combinations.

PROPERTIES	ASTM	MULTI-MATERIAL COMPOSITES (VisiJet CR-WT + VisiJet CE-BK)											
Material Name		RWT-EBK 100	RWT-EBK 150	RWT-EBK 200	RWT-EBK 250	RWT-EBK 300	RWT-EBK 350	RWT-EBK 450	RWT-EBK 500	RWT-EBK 550	RWT-EBK 600	RWT-EBK 650	RWT-EBK 700
Description		Very Rigid	Slightly Rigid	Rigid	Rigid	Slightly rigid	Slightly Rigid	Slightly flexible	Slightly flexible	Flexible	Flexible	More Flexible	Very flexible
Appearance		Very light grey	Lighter grey	Light grey	Light grey	Light grey	Light grey	Medium light grey	Grey	Medium dark grey	Dark grey	Darker grey	Very dark grey
Tensile Strength	D-638	18-27 MPa	14-19 MPa	11-14 MPa	8-11 MPa	5-9 MPa	4.5-8.5 MPa	3-6.6 MPa	1.7-3.7 MPa	1-3 MPa	0.7-2 MPa	0.6-1.8 MPa	0.3-1 MPa
Flexural Strength	D-790	18-21 MPa	12-13 MPa	7-7.4 MPa	3.9-4.2 MPa	1.6-1.9 MPa	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Flexural Modulus	D-790	450-750 MPa	350-550 MPa	150-250 MPa	70-180 MPa	30-80 MPa	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Impact Strength (Notched Izod)	D-256	18-25 J/m	22-30 J/m	32-52 J/m	29-42 J/m	74-114 J/m	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Shore A Hardness, Scale A	D-2240	N/A	N/A	N/A	N/A	N/A	N/A	90	80	70	60	50	40
Shore D Hardness, Scale D	D-2240	75	70	65	60	55	50	N/A	N/A	N/A	N/A	N/A	N/A
Tear Resistance	D-624	N/A	N/A	N/A	N/A	N/A	N/A	44-62 kN/m	25-32 kN/m	18-23 kN/m	11-17 kN/m	6.6-9.3 kN/m	6.5-8.5 kN/m

PROPERTIES	ASTM	MULTI-MATERIAL COMPOSITES (VisiJet CR-CL + VisiJet CE-BK)											
Material Name		RCL-EBK 100	RCL-EBK 150	RCL-EBK 200	RCL-EBK 250	RCL-EBK 300	RCL-EBK 350	RCL-EBK 450	RCL-EBK 500	RCL-EBK 550	RCL-EBK 600	RCL-EBK 650	RCL-EBK 700
Description		Very Rigid	Slightly Rigid	Rigid	Rigid	Slightly rigid	Slightly Rigid	Slightly flexible	Slightly flexible	Flexible	Flexible	More Flexible	Very flexible
Appearance		Transparent Light Grey	Transparent Grey	Transparent Grey	Transparent Grey	Transparent Medium Grey	Transparent Medium Grey	Transparent Medium Grey	Translucent grey	Translucent grey	Translucent grey	Translucent darker grey	Translucent darker grey
Mechanical Properties		*Identical properties to VisiJet CR-WT + VisiJet CE-BK composites in table above*											

PROPERTIES	ASTM	MULTI-MATERIAL COMPOSITES (VisiJet CR-WT + VisiJet CE-NT)											
Material Name		RWT-ENT 100	RWT-ENT 150	RWT-ENT 200	RWT-ENT 250	RWT-ENT 300	RWT-ENT 350	RWT-ENT 450	RWT-ENT 500	RWT-ENT 550	RWT-ENT 600	RWT-ENT 650	RWT-ENT 700
Description		Very Rigid	Slightly Rigid	Rigid	Rigid	Slightly rigid	Slightly Rigid	Slightly flexible	Slightly flexible	Flexible	Flexible	More Flexible	Very flexible
Appearance		Translucent White	Translucent White	Translucent White	Translucent Amber	Translucent Amber	Translucent Amber	Light Amber	Medium Amber	Medium Amber	Darker Amber	Darker Amber	Darker Amber
Mechanical Properties		*Identical properties to VisiJet CR-WT + VisiJet CE-BK composites in table above*											

PROPERTIES	ASTM	MULTI-MATERIAL COMPOSITES (VisiJet CR-CL + VisiJet CE-NT)											
Material Name		RCL-ENT 100	RCL-ENT 150	RCL-ENT 200	RCL-ENT 250	RCL-ENT 300	RCL-ENT 350	RCL-ENT 450	RCL-ENT 500	RCL-ENT 550	RCL-ENT 600	RCL-ENT 650	RCL-ENT 700
Description		Very Rigid	Slightly Rigid	Rigid	Rigid	Slightly rigid	Slightly Rigid	Slightly flexible	Slightly flexible	Flexible	Flexible	More Flexible	Very flexible
Appearance		Translucent Clear	Translucent Clear	Translucent Clear	Translucent Amber	Translucent Amber	Translucent Amber	Light Amber	Medium Amber	Medium Amber	Amber Clear	Amber Clear	Amber Clear
Mechanical Properties		*Identical properties to VisiJet CR-WT + VisiJet CE-BK composites in table above*											

VISIJET® COMPOSITE COMBINATIONS Continued

PROPERTIES	ASTM	MULTI-MATERIAL COMPOSITES (VisiJet CE-BK + VisiJet CE-NT)						
Material Name		EBK-ENT 100	EBK-ENT 200	EBK-ENT 300	EBK-ENT 400	EBK-ENT 500	EBK-ENT 600	RCL-ENT 700
Description		Very flexible	Very flexible	Very flexible	Very flexible	Very flexible	Very flexible	Very flexible
Appearance		Translucent Black	Translucent Black	Translucent Grey	Light Grey	Light Grey	Light Amber	Light Amber
Mechanical Properties		*Similar properties to VisiJet CE-NT or VisiJet CE-BK base materials*						

PROPERTIES	ASTM	MULTI-MATERIAL COMPOSITES (VisiJet CR-CL + VisiJet CR-WT)						
Material Name		RCL-RWT 100	RCL-RWT 200	RCL-RWT 300	RCL-RWT 400	RCL-RWT 500	RCL-RWT 600	RCL-RWT 700
Description		Rigid ABS-like	Rigid ABS-like	Rigid ABS-like	Rigid ABS-like	Rigid ABS-like	Rigid ABS-like	Rigid ABS-like
Appearance		Transparent Pale White	Transparent White	Transparent White	Translucent White	Translucent White	Opaque white	Opaque bright white
Tensile Strength	D-638	37-47 MPa	37-47 MPa	37-47 MPa	37-47 MPa	37-47 MPa	37-47 MPa	37-47 MPa
Tensile Modulus	D-638	1000-1600 MPa	1000-1600 MPa	1000-1600 MPa	1000-1600 MPa	1000-1600 MPa	1000-1600 MPa	1000-1600 MPa
Elongation at Break	D-638	7-16 %	7-16 %	7-16 %	7-16 %	7-16 %	7-16 %	7-16 %
Flexural Strength	D-790	61-72 MPa	61-72 MPa	61-72 MPa	61-72 MPa	61-72 MPa	61-72 MPa	61-72 MPa
Flexural Modulus	D-790	1400-2000 MPa	1400-2000 MPa	1400-2000 MPa	1400-2000 MPa	1400-2000 MPa	1400-2000 MPa	1400-2000 MPa
Heat Deflection Temperature	D-648 @ 0.45 MPa"	46 °C	46 °C	46 °C	46 °C	46°C	46 °C	46 °C
Impact Strength (Notched Izod)	D-256	16-19 J/m	16-19 J/m	16-19 J/m	16-19 J/m	16-19 J/m	16-19 J/m	16-19 J/m
Shore Hardness (D), Scale D	D-2241	76-80	76-80	76-80	76-80	76-80	76-80	76-80

DISCLAIMER: It is the responsibility of each customer to determine that its use of any VisiJet® material is safe, lawful and technically suitable to the customer's intended applications. The values presented here are for reference only and may vary. Customers should conduct their own testing to ensure suitability for their intended application.

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