



Veroultra™ Black and Veroultra™ White for J7 and J8 Series

Overview

Full-color 3D printing becomes more vibrant and accurate with the use of the following opaque, rigid Model printing materials:

- Veroultra™White RGD825™—a white material with improved opacity compared to VeropureWhite™.
- Veroultra™Black RGD865™—a black material with improved opacity compared to VeroblackPlus™.

VeroUltra™ Black and VeroUltra™ White for J7 and J8 Series

This document describes recommendations and tips for achieving optimum quality and color accuracy when printing parts with these materials.

- A. Supported Printers, Modes, and Support Materials
- B. Preparing Parts
- C. Preparing for Printing
- D. Maintaining the Printer
- E. Printing Parts
- F. Part Quality



Figure 1: Thin label with text—blurred with Vero materials (left); sharp and realistic with VeroUltra opaque materials (right)



Figure 2: Material opacity—partially translucent with Vero materials (left); fully opaque with VeroUltra opaque materials (right)

Recommendations and Tips

A. Supported Printers, Modes, and Support Material

System	Printing Mode	Support Material
J826™		
J850™ / J835™		
J750™ / J735™	All	<ul style="list-style-type: none"> • SUP705™/SUP705B™ • SUP706B™
J750™ Digital Anatomy™		
J720™ Dental		

- When printing with VeroUltraWhite and VeroUltraBlack or material combinations based on them, the following printer settings are automatically adjusted to ensure optimum quality.
 - Activation of one UV lamp in High Quality mode only.
 - Activation of the roller when the print block travels from right to left.

B. Preparing Parts

For consistent color and best color accuracy:

- If you are printing with VeroUltraBlack, prefer a surface thickness of at least 2 millimeters (1 mm core, and 0.5 mm texture layer).
- If you are not printing with VeroUltraBlack, surface thickness should be at least 3 millimeters (1mm core, and 1 mm texture layer).

This is especially important when printing overlapping areas.



Figure 3: 2-mm thickness (left); 3-mm thickness (right)

C. Preparing for Printing

- To print with the opaque VeroUltra materials, you must load both VeroUltraWhite and VeroUltraBlack cartridges.
- To print full color parts, you must load vivid-color (CMY) cartridges. If these are not loaded, you will be able to print, however, the black and white will not be used.
- VeroUltraBlack can be loaded in any compartment in the material cabinet.
- In J750 Digital Anatomy printers, to ensure the health of the print heads, do not load GelMatrix™ and VeroUltraBlack in the adjacent cartridge compartments (same print head).

Recommendations and Tips

- **VeroUltraWhite on J7 Printers and J850/J835—**
 - This material can only be loaded in the M1, M2, M3, and M4 compartments in the material cabinet.
 - Since VeroUltraWhite can be loaded only in the above compartments, and each print head can contain 2 materials, it is highly recommended to position VeroUltraWhite in the same print head with the following materials according to the following priority:

Priority Use VeroUltraWhite in the same print head with:

- 1 VeroClear™ / VeroUltra™ Clear / Agilus30™ Clear / Agilus30™ White / RGD515™ / RGD531™
- 2 VeroYellow™ / VeroYellow™V / DraftGrey™ / RGD535™

- It is not recommended to position VeroUltraWhite in the same print head with the following materials: VeroMagenta™ / VeroMagenta™V / VeroCyan™ / VeroCyan™V / VeroBlackPlus™ / VeroUltra™ Black / Agilus30™ Black.
- The following figure shows a recommended material setup in the print block when using VeroUltraWhite in J7 Series Printers.

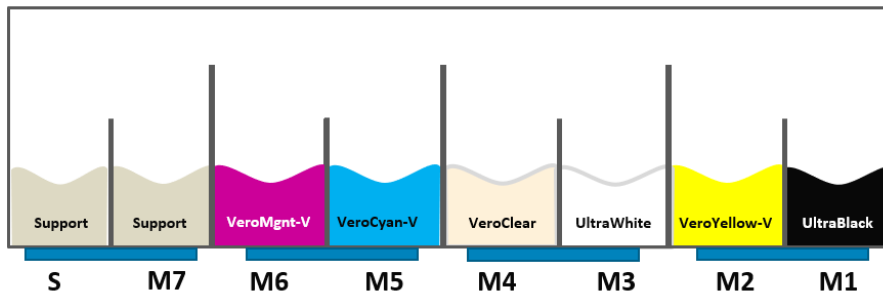


Figure 4: Six Model materials loaded in the print heads (J7 printers)

- The following figure shows a recommended material setup in the print block when using VeroUltraWhite in J850/J835.

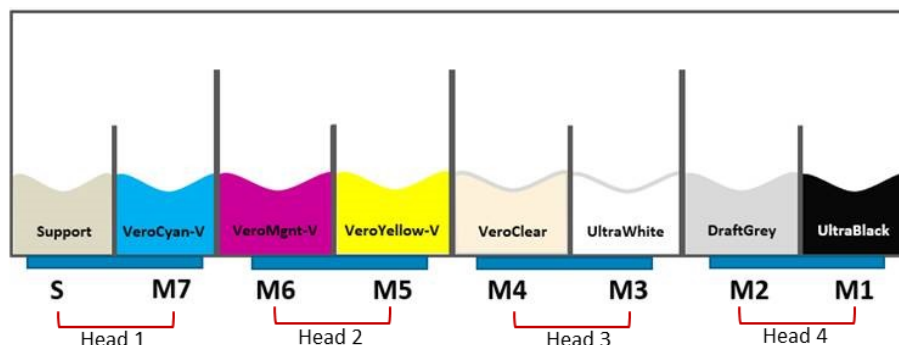


Figure 5: Seven Model materials loaded in the print heads (J850/J835)

Recommendations and Tips

- On J850/J835, in High Speed mode (printing with 3 materials), it is not possible to print VeroUltraWhite with two Agilus30 materials loaded in the print block.
- VeroUltraWhite on J826—
The printer application automatically assigns VeroUltraWhite to the M7 compartment in the materials cabinet.

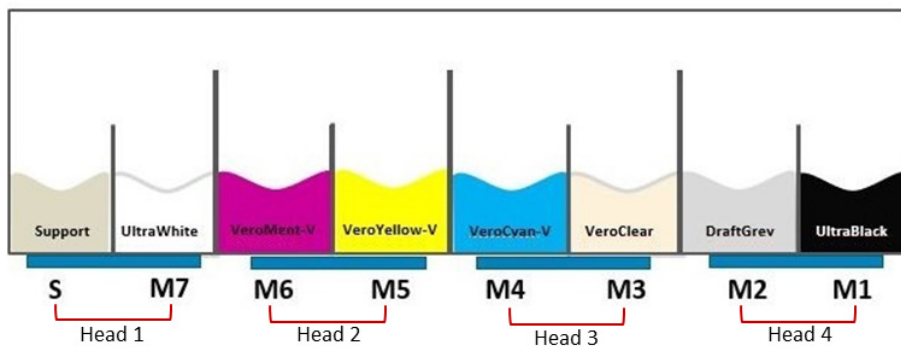


Figure 6: Seven Model materials loaded in the print heads (J826)

- When using SUP706B™, to ensure part quality, the default grid style is Standard instead of Lite. If you are using the DT3 or CSIP cleaning station, change the grid style to Lite to prevent the filter from clogging.

D. Maintaining the Printer

To ensure model quality and color accuracy, follow these guidelines:

- After every print job, run the Cleaning wizard and make sure to clean both UV glass lenses, as follows:
 - a) Wipe the lenses with a dry 3M® sanding sponge (supplied in the Start-Up Kit).
 - b) Clean the lenses with a cleaning cloth soaked with 90% isopropanol (IPA or ethanol).
- When performing the UV Lamp Calibration wizard, make sure that the UV lamps are calibrated, and the UV intensity level meets the specification.
- Every 300 printing hours run the Head Alignment wizard and make sure that the print heads are aligned as best as possible for best color accuracy. When done, run the Color Uniformity wizard to ensure color accuracy.

Recommendations and Tips

E. Printing Parts

When printing VeroUltraWhite or VeroUltraBlack together with clear materials, the Support grid is printed with the clear material instead of white material, resulting in a transparent Support structure.

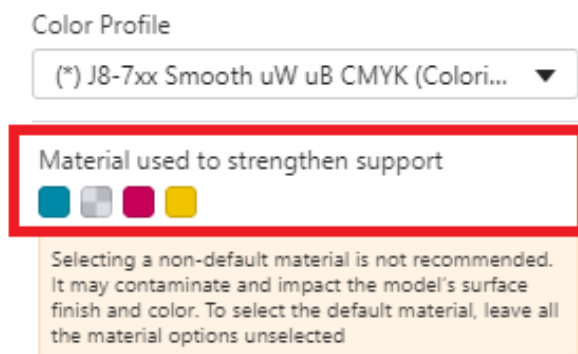


Figure 7: Materials available for the Support grid

F. Part Quality

- Occasionally, the Support material may contain white or black material. The discolorations are only in the Support material and do not affect the color or the surface of the printed part. Effective Support removal resolves this issue.
- Glossy vertical walls printed with VeroUltraWhite or VeroUltraBlack may have a rougher surface compared to walls printed in VeroPureWhite or VeroBlackPlus.

DOC-18032 Rev. E

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