Document Introduction

This Technical Data Bulletin provides guidelines to successfully digitally print Aura Optical Systems' AURA® 196 / 197 Prismatic reflective sheeting on an HP Latex 360/365 digital printer.

NOTE: If these procedures are not properly followed, any warranties provided by Aura Optical Systems may be voided.

Preparing to Digitally Print

1. Prior to printing, the reflective sheeting and digital inks should acclimate to room temperature for at least 24 hours prior to printing.

2. Operate the digital printer in a clean environment under ambient temperature conditions (72° F / 50% Relative Humidity). Avoid extreme temperature or humidity conditions.

Choosing the Correct Printing Profile

Two different profiles are available for use with the AURA® 196 / 197 Prismatic products. The difference between the two profiles is how black colors are printed. For most printing jobs, the *CMYK Profile* should be utilized as it will provide opaque and highly saturated black colors. The *K Only Profile* can be utilized when the highest levels of opacity and saturation are not needed. For color printing, the *CMYK Profile* should be utilized.

CMYK Profile: The *CMYK Profile* achieves high levels of black opacity and saturation by using all four ink colors to create black. Optimal printing will occur using artwork files, where the black is constructed using C= 100%, M=100%, Y=100% and K=100%. Artwork files may need to be adjusted to construct black in this fashion. The file name for the *CMYK Profile* is "AURA 196 CMYK".

K Only Profile: The *K Only Profile* is for artwork where the black color is constructed with C=0%, M=0%, Y=0% and K=100%. The benefit of the *K Only Profile* is that the printing will not consume all four ink colors. However, the black color will not appear fully opaque and saturated. To achieve full opacity and saturation, the *CMYK Profile* should be utilized and the artwork file will need to be adjusted accordingly. The file name for the *K Only Profile* is "AURA 196 K Only".

Upload the Printing Profile to the HP Printer

1. Download the profile from auraopticalsystems.com/documentation

2. Enter the HP printer's unique IP address into a web the browse'rs search bar. (example IP: 123.4.5.67)

3. Click on the Setup tab

4. Click on Substrates Preset Management

5. Choose the File from the folder it was downloaded to

6. Click Update

7. To complete the update, click "Allow" on the HP printer's touch screen when prompted

Material Handling

Compared to vinyl materials and many other substrates, AURA® 196 / 197 Prismatic sheeting is quite thick and rigid. As such, special set-up and handling requirements are necessary to ensure the product lays flat through the printing process. **To avoid printing head strikes or head crashes, it is critical that these guidelines are followed to keep the material flat.**

1. Ensure the sheeting is laying flat at all times in the printing area. Maintaining tension on the material will assist in keeping it flat.

2. Use of edge guides is required.

3. Before printing, feed the prismatic sheeting through the machine so that it hangs over the edge by approximately 8" to ensure it naturally lays flat.

4. Use the machine take-up reel to rewind the material. The sheeting must rewind correctly to keep proper tension during printing.

5. Do not allow the material to telescope during unwind or rewind.

6. It is a good practice to check the material for any problems periodically during long runs (>1 hour) and to adjust roll tension accordingly.

Color Calibration

Because AURA® 196 is a retroreflective media, the color calibration step on the printer (when creating the media in the printer substrate library) will not function properly. The built-in i1 cannot measure properly on reflective materials.

To ensure correct color calibration settings, please calibrate using a roll of gloss-white self-adhesive vinyl. Only calibrate if necessary due to unusual color consistency.

Overlaminate Films

An overlaminate film may be used to extend the outdoor life of the digital print. This may not be necessary for certain short-life signs or graphics.

If over-laminating, a premium high-gloss over-laminate film is recommended. Do not use a matte overlaminate film as this will decrease the reflectivity levels of the prismatic sheeting.

Lamination should occur only after the printed graphics are completely dry. It is best to allow the graphics to dry overnight. Use only cold lamination methods. Ensure lamination is wrinkle free and that the over-laminate film enters the nip without any wrinkles. If wrinkles occur, the nip pressure setting may be too high. Avoid high tensions on either the printed reflective film or the over-laminate film. After lamination, the material should lay flat without any curling. If curling is present, the tensions or nip pressures may be too high.

Important Warranty Information

All of the parameters listed here are start points and may need adjustments based on printing conditions. Please make adjustments accordingly to ensure the best quality print possible.

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Aura Optical Systems, L.P.
7415 Whitehall, Suite 111
Ft. Worth, Texas 76118 U.S.A.
General / International Inquiries: +1 (801) 668-3439
USA Sales Inquiries: +1 (682) 227-1208
www.auraopticalsystems.com