Avery® Instructional Bulletin 4.10
Working Procedure for the Use of Avery® MPI Media on Vutek Printers

Introduction

This document describes general handling procedures of the Avery range of MPI digital pressure sensitive vinyls suitable for use with Vutek printers. The specifications of both the materials and the printers are mentioned in this document.

Vutek printers work with specific settings when printing on substrates. These settings are needed for controlling the temperature for pre-heating the substrate. In this Instructional Bulletin, the Avery MPI range of vinyl, the specific printability properties, and the temperature for after heating (drying) of the ink sprayed onto the vinyl are detailed. These settings are important to achieve a high quality print when using Vutek printers to produce full-colour decals. These settings will also assist the printer to better control possible problems such as ink bleeding due to high ink saturation.

Please also refer to the technical reference guide for the relevant Vutek printer.
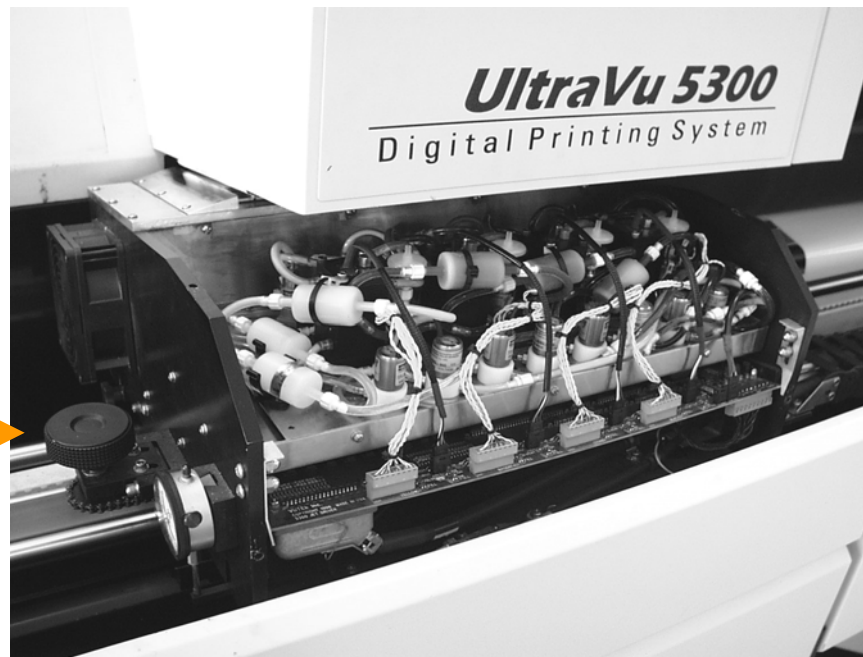
Printing/Handling Recommendations

1. Only use media that has been approved by Avery. These materials are tested on the printer together with Vutek and therefore recommended.

2. Ensure that before printing, the material is stored in the printing room for at least 48 hours. This is to allow the material to adapt to the minimum application temperature, which is mentioned on respective datasheets.

3. It is important to load the material in the printer with straight alignment. For this reason the tabs should be firmly pushed into the two core sides to avoid the material moving during printing.

4. The loading itself must be done in accordance with the manuals from Vutek, as this differs for each Vutek printer. The optical eye attached to the printhead of each printer measures the different sizes of materials automatically.

5. Ensure that the tension after loading is equal across the full width of the material, i.e. without any wrinkles. If this is not loaded properly, it might affect the quality of the print.

6. Before printing it is advised to do an 'Ink Prime' and an 'Ink Purge', particularly if the printer has not been used for a substantial period. For the correct method, refer to the Vutek printer manual. Some clogged nozzles will not affect the print quality in full-colour prints. These nozzles will open automatically during printing.

7. **Printing head distance from the material**
    It is important to set the print head as close as possible to the vinyl in order to get the best print quality. Please avoid direct contact with the print head and the vinyl. This will cause striping in the image during printing.

    *Note: The head for the **Vutek 2360** printer is not adjustable.*

For the Vutek 3300 and the Vutek 5300 printers
Move the print head to the loaded vinyl and adjust the print head by turning the knob, which is located at the left side of the print head, (see photo), up or down to the desired distance from the vinyl. Avoid direct contact with the vinyl.

TURNING KNOB

8. **Temperature setting**
   In this instructional bulletin, you will see the actual settings done on the Vutek printers with Avery vinyls. The settings differ for each Avery media and are a recommendation to get an appropriate ratio of Ink / Vinyl. To adjust the temperature, push the up / down buttons located on the front panels of the printers (see photos).

Note: Temperatures mentioned in this bulletin are a reference only. It was applied during testing but can differ per country/region, due to temperature and humidity differences. Users should try a few settings close to the recommended settings.

Frontpanel from the Vutek printer models 5300 and 3300
Setting the pre-heating
Setting the after-heating (drying)

Frontpanel from the Vutek 2360 printer
Setting the pre-heating
Setting the after-heating (Drying)

9. Choose the file to print and set the proper print quality in the RIP. The print quality settings are the following:

   - **Ultra:** gives the best quality.
   - **Enhanced:** gives the second best quality with higher speed.
   - **Low Res:** gives the highest speed, but less quality.

   For each setting the user can make a second choice being **standard** or **high** resolution. It is recommended that you also refer to the manual printer for these settings.

MATERIALS	FILM	ADHESIVE
MPI-1003/1005EZ	Gloss white cast vinyl 53 microns	permanent
MPI-1040	Gloss clear cast vinyl 50 microns	permanent
MPI-2112	Gloss white calandered vinyl 80 microns	removable
MPI-2002	Gloss white calandered vinyl 80 microns	removable
MPI-2003	Gloss white calandered vinyl 80 microns	permanent
MPI-2040	Gloss clear calandered vinyl 80 microns	permanent
MPI-2041	Gloss clear calandered vinyl 80 microns	removable
MPI-8112	Gloss white calandered vinyl 100 microns	removable
MPI-3000	Gloss white calandered vinyl 100 microns	permanent
MPI-3001	Gloss white calandered vinyl 100 microns	removable
MPI-3021	Matt white calandered vinyl 100 microns	removable

10. **Start printing**

   Working conditions
   Ideal room temperature is: 22 – 30°C.
   Ideal humidity degree is: 50 – 55%.
   (The ink viscosity might give poor printing results when the humidity is too high.)

Settings:

	Vutek 2360	Vutek 2360	Vutek5300/3300	Vutek5300/3300
	PRE-HEAT	AFTER-HEAT	PRE-HEAT	AFTER-HEAT
MPI-1003	35/40	60/65	35/40	60/65
MPI-1005 EZ	35/40	60/65	35/40	60/65
MPI-1040	35/40	60/65	35/40	60/65
MPI-2040	30/35	55/65	30	55/65
MPI-2041	30/35	55/65	30	55/65
MPI-2002	30/35	55/65	30	55/65
MPI-2003	30/35	55/65	30	55/65
MPI-2112	30/35	55/65	30	55/65
MPI-8112	40	60	35/40	60
MPI-3000	40	60	35/40	60
MPI-3001	40	60	35/40	60
MPI-3021	40	55/65	40	55/65

Note: The pre-heat setting is always below 49 ^{o}C. If this exceeds this temperature it can cause uneven dot gain across the print. It also increases the chance of ink bleeding in the jets and clogging of the ink.

Using Photoshop files
Photoshop will in many cases be used for job file printing or when photos / artwork is scanned. When printing direct from Photoshop it is necessary to do a proper 'Ink Setup' in order to avoid ink bleeding.
   - go to file menu
   - choose colour settings
   - choose separation set-up
   - select UCR option
   - set Black to 75 percent
   - set Total Ink limit between a range of 220 to 300%.

Note: This information is based on the present state of our knowledge but no warranty, express or implied is made. If you need further information, please consult your Avery films supplier.

For further information, contact your local Avery Graphics representative.

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