

Digital Printing 101

In the world of digital inkjet printing, there are many variables to achieving a quality output. These different variables will affect the way printers function, inks prints and the media reacts to the printing method. Below are basic recommendations for achieving optimal print quality on MACtac[®] IMAGin[®] and REBEL[™] digital print media.

Environment

- Print room must be a clean, well ventilated, temperature and humidity controlled room.
- It should be in an enclosed area away from high traffic, warehouse, etc. This will keep the printer and print heads clear of debris; and keep dust and dirt off of the media before and after printing.
- Gloves are recommended for handling the media as to keep fingerprints and oil from your hands off of the printed surface.
- Recommended relative humidity: 40-60%
- Recommended temperature: 70-75 degrees F
- All rolls of media should be stored in the room for 24 hours prior to printing to acclimate to the environment.

Static

Having a controlled room also helps control static. Static can negatively affect ink lay down and attract dust and dirt towards the media and printing area. Do not place carpet or rugs in the printing area that would attract static. Static also thrives in low humidity environments. Static string is a relatively inexpensive way to help control static. You can find it at www.stopstatic.com. Apply the string to a metal piece of the printer (good to loosen a screw and tighten back). Then run across the web width of the media one inch away. Again, apply other end of string to a metal piece of the printer and ground to the floor. Grounding to something away from the printer is important. Even though your printer is ground, it is only grounded for the electrical part. This is grounding for the body of the printer.

Media Profiles

Using the proper profiles is the key to optimal printing. This includes proper heat settings, ink restrictions, linearization, total ink limits and ultimately the ICC profile. Without these correct profiles, the media will not print properly! Profiles will control output, increase production time and reduce ink usage. Visit www.mactac.com to download the correct profile for your printer. There are over 1000 profiles online for all the major printers and RIP software. A read me file is also attached with instructions on how to download and import into your RIP software.

Printer Maintenance

Follow all printer manufacturers' guidelines for printer maintenance. Proper maintenance will ensure correct calibration and increase the life of the printer, print heads and mechanical parts.

Dry Time

If you are printing with water-based, solvent, mild solvent or eco-solvent inks then you **must allow the printed graphics to dry properly**. Dry to the touch does not mean that the printed graphics are completely dry or "cured". The graphics must be accessible (open) to the air to allow the solvents to evaporate. Printing and winding directly onto a take up roll and setting the roll in the corner is not drying. There must be air flow to push the solvents away from the media!

We recommend a minimum of **24-48 hours dry time** before any type of finishing which includes: overlaminating or clear coating and image trimming. Without the recommended dry time the solvents are trapped in the film which can modify the film by swelling it (like a sponge) or softening it which will ultimately result in severe shrinkage and graphic failure. In addition, the trapped solvents will migrate into the adhesive completely changing the specific characteristics for which they were carefully designed to do. We cannot stress enough the importance of drying the graphics properly.

MACTac recommend a maximum ink saturation of 270%

Follow these recommendations to control these variables in your printing process and you will be on your way to better controlled output, happier customers and an increased bottom line.

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