

VersaUV Adhesion guide: Acrylic (Poly (methyl methacrylate))

Introduction

The following Workflow options provide methods for adhesion of ECO-UV (Version 2 and 4) inks on generic acrylic (Poly (methyl methacrylate)). These findings are a result of various printing tests from sample request fulfillment, in-house production and on-site application support. The information provided is simply a reference to manage expectations when printing on acrylic.

***Please note:** There are many different manufactures and types of acrylic. Prior to doing multiple prints it is recommended that you test your material prior to full production. With the launch of VersaUV printers and ECO-UV inks, users can print on variety of materials, including plastic or acrylic, acrylic, metals, etc. When printing on these special materials, adhesion of UV ink on to the surface of these special materials must be considered. Results may vary, but adhesion to the acrylic will increase with the use of a promoter. Most acrylic sheets will have a release liner protecting the printable surface, it is imperative to clean the surface after removing the liner.*



Adhesion print workflow: Adhesion Promoter

Step 1: As most acrylic sheets will have a release liner protecting the printable surface, it is imperative to clean the surface after removing the liner. Clean the material with Isopropyl Alcohol or a cleaning agent such as Spray Nine. Use a fully-wet, lint-free cloth (commonly found at Home Depot or Costco etc.) to clean the material and wipe-down with an additional dry lint-free cloth after application.

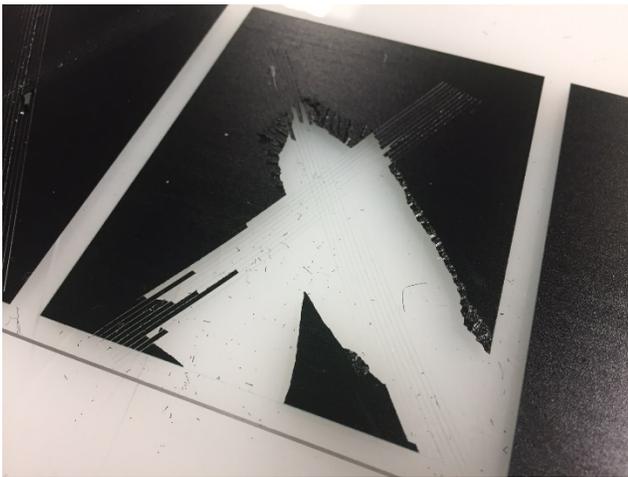


Step 2: Using a new lint-free cloth, liberally douse the cloth in adhesion promoter and wipe-down the acrylic. If necessary, use an additional dry lint-free cloth after application to remove any excess adhesion promoter or to “buff-out” streaks. We recommend 3 types of adhesion promoters for acrylic for the effectiveness and ease of application:

1. **InkCups ICN PP Primer** (<http://www.inkcups.com/printing-inks/ink-solvent-tech-data/screen-pad-printing-auxiliary-specs-msds/Default.aspx>)
2. **Nazdar 7035 Adhesion Promoter** (https://www.nazdar.com/Portals/0/TDS/UV-Inkjet/LWU70xx_Adhesion_Promoters.html)
3. **SEM XXX** (<https://www.semproducts.com/product/xxx-adhesion-promoter/promoter>)



Step 3: Print and Test adhesion. The images below were tested with a cross-hatch tape test, utilizing an Adhesion Test kit. The image on the left was printed with NO adhesion while the image on the right was printed 5 minutes after ICN PP Primer adhesion promoter was applied.



No Adhesion Promoter



with Adhesion Promoter



*Adhesion Promoters may or may not have an irritant odor. However, all these primers may contain aggressive chemicals and should be handled with care. The use of gloves is mandatory and should be used in a well-ventilated area.