

Pad Printing With Nazdar Inks

Pad printing is the process of transferring ink from an etched plate to the substrate using a rubberized pad. Pad printing is perfect for printing on small or irregular shaped substrates. The process allows printers to print small areas with very fine detail.

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Pad Printing Overview

Pad printing (also called tampography or tampon printing) is a print process that transfers an image onto a 3-D object. This process uses indirect offset (gravure) method that involves an image being transferred from the cliché via a silicone pad onto a substrate.

Pad printers are most commonly associated with promotional printing. Promotional printers are companies that personalize items for companies or events by screen printing, pad printing, digital printing, embroidery, laser etching, etc.

Promotional printers print high quality visual work to attract someone to a brand. The most common things a promotional printer is concerned about are print definition, color and adhesion.

Pad printers print on different color substrates, therefore, pad printing inks must be highly pigmented and opaque.

Pad Printing

The pad printing process starts with the cliché or plate. Artwork is etched into the plate by chemical or photo polymer etching.

Ink is put into an ink cup or ink well that sits on top of the cliché and moves over the image area. Ink is deposited in the etched area. When the ink cup moves away, excess ink is removed by the ink cup or a doctor blade.

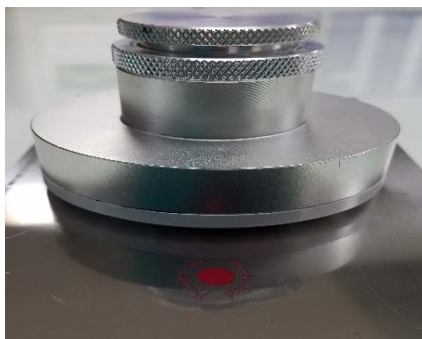


Figure 1: Ink Cup and Cliché

The silicone pad or tampon comes down, contacting the ink in the image. The ink is picked up by the pad and pressed to the substrate. At this point, the ink releases or transfers from the silicone pad to the substrate's surface.



Figure 2: Silicone pad and finished pieces

Inks

Printing

Pad printing ink must be tacky enough to transfer from the pad to the substrate. Inks must also be thin enough to flow into the etched areas of the cliché but not so thin that it smears on the pad or substrate. Inks must also dry to the touch soon after printing, however inks that dry too quickly will dry on the cliché.

Nazdar manufactures UV and Solvent based inks that can be pad printed. The addition of reducer or thinner may be needed to get the correct tack and viscosity to properly pad print the ink.

Clean Up

Inks can be cleaned off the cliché and ink cup or well with normal cleaning solvent. Silicone pads should not be cleaned with solvents. Solvents will degrade the pad and significantly shorten its usable life. Instead, clean the ink from the pad using shipping tape. Apply the sticky side of the shipping tape to the pad. When removed, all the ink will come off on the tape.

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Promotional Products Ink Application Chart		Coated Paper	Glass/Ceramic	Aluminum/Brass	Chrome	Stainless Steel	Leather	Neoprene	Bamboo	Polyurethane	Rubber	HDPE/LDPE	ABS	Textile	Acrylic	Polyethylene	Treated Polypro	Untreated Polypro	Styrene	Vinyl (PVC)	Polyester (PET)
Series	Base Chemistry																				
2300	UV/UV-LED		✓									✓					✓				✓
5100	Solvent		✓									✓				✓	✓				
8400	Solvent				✓		✓	✓	✓	✓	✓			✓							✓
9700	Solvent	✓							✓	✓			✓		✓				✓	✓	✓
ADE	Solvent		✓	✓		✓						✓				✓	✓				
PA	Solvent																	✓			
System 2	Solvent												✓		✓				✓	✓	✓
VF	Solvent																			✓	✓

✓ – Appropriate ink for substrate