

When A Coating is Recommended for UV Inkjet Printing

[Abridged excerpt of the original technical tip article]

When you decide to print with a UV Inkjet platform, you've probably chosen that method for a number of reasons. One of the main benefits of UV inkjet printing is the inks ability to adhere to almost anything, without sacrificing vibrant colors and tight, detailed imagery. But, sometimes, there are applications that may require 'above and beyond' ink adhesion. With the advancements in UV inks and media, it's hard to know when a specialty coating is worth the upfront cost to save you time and money downstream.

The dyne level, chemical compatibility of the ink and the material surface are the deciding factors in how great your adhesion levels will be. Each ink chemistry is different, and testing is always recommended, however, there are a few known guidelines to give you the best starting point.

Rigid Vinyl and Polystyrene

Rigid Vinyl (PVC) and High Impact Styrene (HIPS) tend to maintain higher dyne levels than polyesters or polycarbonate, making them an easy go-to for UV inkjet printing. In combination with the dyne level, the chemicals within the ink, roughen up the surface of Rigid Vinyl PVC and HIPS just enough to allow for mechanical interlocking. These films are most likely to be used for signage, point-of-purchase and promotional items that are less likely to need long-term durability or post-processing that includes adhesive being applied directly to the ink. Coating is rarely needed.

Polyester

Polyester (PET) film is often one of the desired options when UV inkjet printing due to its optical brilliance. This substrate inherently matches the vibrancy and durability of UV inkjet inks. It can be a great choice for POP signage, backlit signs and promotional materials that need a higher-end look. However, PET does not inherently hold dyne levels that are optimal for long-term adhesion. Therefore, this material works best with UV inkjet inks if the material is offered with a pre-treat. This allows for enough surface tension for proper wetting and a chemical compatibility to allow chemical bonding. Primer is recommended.

Polycarbonate

Polycarbonate (PC) does not naturally maintain a high dyne level, leaving the raw substrate at a disadvantage for UV inkjet ink anchorage. PC also tends to be less naturally porous with fewer voids or crevasses, which does not allow for ideal adhesion. When polycarbonate is textured, the topography imposed on the surface does not create voids fitting for a mechanical bond.

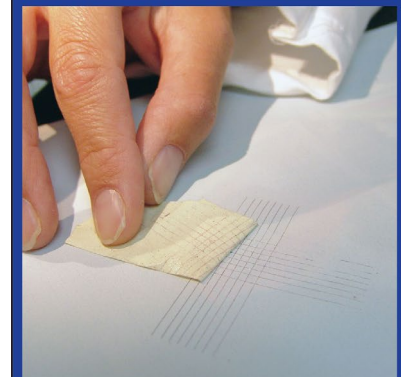
Due to the smooth surface of the material, polycarbonate will accept ink. However, the ink is not likely to withstand any aggressive post-processing, adhesive backing or heavy use in the field. In

these situations, a proper coating on the material will be the best solution to ensure adequate adhesion. When a chemical bond between the ink and the coating have been formed, you have an increased probability of successful adhesion during testing.

Polycarbonate is typically used for applications with UV inks that require a higher-end visual or higher-stress end use application, due to its durable nature. For instance, backlit signage or reverse sign graphics, which generally require adhesive to be applied to the ink directly before mounting.



UV Injet printed uncoated polycarbonate fails the ASTM D3359 tape test.



UV Injet Printed JetView coated polycarbonate passes the same test.

Testing/Conclusion

When choosing the best material for your application, the end use and post-processes the printed material will go through are the most important factors. If there will be adhesive applied to the ink after printing, it is recommended that you test the material with an ASTM D3359 cross-hatch tape test for ink adhesion, a minimum of 24 hours after printing.

For the full technical tip article, please [click here](#).

Tekra Ventures into Food Packaging Market

Tekra, A Division of EIS, Inc. is excited to announce entry into a new market— [lidding and sealant films](#) for food packaging. For the past 25 years, DuPont Teijin Films™ and Tekra, A Division of EIS, Inc. have built a strong partnership around industrial polyester films. The addition of the market trusted Mylar® line of polyester packaging films is well aligned with Tekra’s capabilities as a distributor and converter of plastic films, serving markets where quality is crucial.

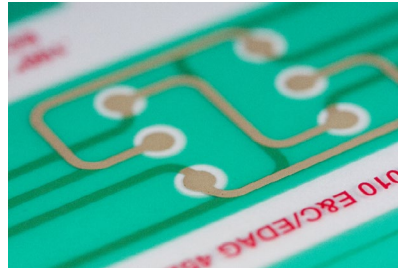
While the world of food packaging is vast, Tekra will focus on four key market segments: [fresh produce](#), [frozen food](#), [chilled ready meals](#), and [ovenable films](#). Most commonly, the film will be used as the lid portion of a food tray, but can also be used in overwrap applications where the film will be sealed onto itself. “The Mylar® films have been engineered to fit the tray type, equipment, and the specific application,” says Kevin Suino, Market Development Manager. “Special features, such as anti-fog and print treatment, are readily available and have been proven to stand up to the challenges of food distribution.”



The US food industry is putting a focus on consumer convenience, with an expansion of offerings including grab-and-go salads, freshly cut produce, and ready meals. “The application possibilities are expanding as fast as the ready meal market itself, and we are thrilled to position our customers to be a part of this trend,” continued Suino.

Please visit Tekra’s [lidding and sealant film](#) website, and put in an RFQ or sample request for more information.

Silver Ink Savings Challenge



Tekra’s vendor partner for conductive inks, Henkel Electronic Materials, is a world class science and engineering pioneer in the market place. Henkel offers a full range of conductive inks from silver to dielectric to carbon and beyond.

[Loctite® 1010](#) is a silver conductive ink that can be screen printed or rotary screen printed. This product is highly conductive with very low resistance and

offers major SAVINGS! Printers are able to deposit less ink than competitive silver compositions. Resulting in an average of 30% savings in cost.

[Loctite® 1011](#) is another silver conductive ink that is both screen and flexo printable for higher speed printing. Smaller particle size optimized for higher speed printing applications, this composition also offers printers a 30% savings average per job.

If you’d like to join the Silver Ink Savings Challenge here’s what you can do:

1. Call your Tekra sales rep at 1-800-448-3572 for a sample.
2. Test the product in your application.
3. Complete the trial feedback form Tekra will send you.
4. Your name is entered into a drawing to win a pair of Apple AirPods!*
5. Winner will be chosen on August 31st!

For more information or to receive your sample contact Tekra at 1-800-448-3572 and start saving now!

*Limit of one prize entry per eligible and qualifying customer. Only completed response forms returned to Veronica Chandre at Tekra, A Division of EIS, Inc. between 7/10/18 and 8/24/18 are eligible for the prize entry. Offer expires on 8/27/18, drawing to be held on Friday 8/31/18. Tekra, A Division of EIS, Inc. reserves the right to limit multiple entries, offer a comparable gift of equal value, or discontinue the offer at any time. Prize will be mailed no later than Fri Sept 7th, 2018. Requests for prize color cannot be accommodated. Allow a minimum of 4 to 8 weeks to receive the free gift.

DuraKote™ Polyester Takes the Heat

If you’re looking for durable solutions for your dry toner laser digital color press, our [DuraKote™](#) material is the answer. While paper will easily tear and doesn’t keep its shape or clean appearance when handled in the field, polyester is naturally tear-resistant. These specially treated films create a longer-lasting alternative to paper products, showing bright imagery, optical brilliance, and superior strength.

Its durability will first be noticed in its thermally stable properties, as this material maintains its shape when traveling through the heat of a toner printer and will out-perform non-stabilized materials in applications that expose the product to high temperatures. The DuraKote durability continues with natural solvent resistance, making these films an ideal choice for durable labeling on machinery that sees demanding conditions and chemicals.

DuraKote materials are coated on both sides offering superior ink anchorage and color vibrancy. In addition, the material and coating are water resistant, making it an excellent choice for restaurant menus, maps, and manuals where water exposure may be present.

DuraKote Polyester is part of Tekra’s ToneKote™ line of films, which are all specifically designed for dry toner laser color digital presses. Within this line, you can find white, matte and clear polyester based materials, ranging from 4 mils to 10 mils thick. Visit our website for product-specific information or to request a sample.