

VinylEfx® Application Guide

HOW TO SELECT THE RIGHT VINYLEFX FILM FOR YOUR NEXT PROJECT

RTAPE.COM

Application	Decorative Series	Durable Series	Comments
Outdoor Signage		✓	Application to flat, smooth, non-porous vertical surfaces. Only apply VinylEfx films dry. Wet applications are not warranted.
Window Graphics		✓	Allow 1/8" to 1/4" space from frames. Do not use Windex to prep the glass surface.
Wall Graphics (Indoors)	✓		Application to flat, smooth, non-textured walls vertical surfaces. On walls painted with a matte finish paint, test the VinylEfx film for adhesion prior to the application.
Digitally Printed Promotional Posters (Indoor)	✓		Printable using Thermal Transfer, UV Inkjet, Solvent/Ecosolvent and Latex printers. Not printable using aqueous printers. Allow 1/4" border around graphics, when printing with Solvent/Ecosolvent printers. Profiles for many of the most popular printers are downloadable from the RTape website. NOTE: The high temperatures of some first generation latex printers can distort the VinylEfx patterns as well as causing tunneling of the film on the liner and head strikes. Outdoor applications should be laminated.
Screen Printed Graphics	✓	✓	Recommended inks include Sericol TMI II, Nazdar 3500 UV inks and 3M 9700 UV inks. Both Nazdar 3500 series and 3M 9700 UV inks print exceptionally well through a 355 or 380 mesh. Sericol TMI II is a solvent-based vinyl ink. This ink can be either air dried or jet dried. Excessive heat used in drying solvent inks can cause VinylEfx films to shrink. UV curing also subjects VinylEfx film to intense energy, which can cause film shrinkage, as much as 1/32". To minimize shrinkage, reduce the energy level and speed up the conveyor belt. Adjust the setting of the UV curing lamps to 300 watts, and run the belt speed at 50 feet per minute.
Vehicle Graphics		✓	Only use the VinylEfx films on flat, smooth, vertical surfaces. Always edge seal graphics. Surface prep with solvents may be required to remove waxes, tar, soot and grease. Service temperatures above 150°F can be problematic. Not for application to riveted surfaces, corrugations or vehicle wraps.
Domed Graphics (Indoor & Outdoor)	✓	✓	Use Durable Series for outdoor applications. Test resin for compatibility prior to production.
Marine Graphics		✓	Not for application to submerged surfaces. Always edge seal graphics to prevent galvanic corrosion.
POP Displays, Tradeshow Graphics, Museum Graphics	✓		Always test VinylEfx films to the substrate selected prior to production of graphics. Please be aware that adhesion depends on several factors, such as time, temperature, application pressure and the substrate.
Floor Graphics (Indoor)	✓		Protect floor graphics with a non-slip overlamine.

✓ Recommended Film

NOTE: Outdoor durability for the Durable Series of VinylEfx is typically three years.

Application Temperature Range

Optimal ambient temperature for the application of VinylEfx® is 70 °F (21° C). Pressure sensitive vinyl may resist sticking immediately to very cold surfaces.

Do not apply wet. VinylEfx® films must be applied dry. The warranty is voided for wet applications.

AT A GLANCE

- Apply only to clean, smooth non-porous surfaces.
- Only apply dry - never wet!
- Use ICC Printer Profile for High Gloss Vinyl at Low Temperature (35 - 40C).
- Cut a 1/4" (6mm) border around images printed with solvent or ecosolvent inks to help prevent edge curl.
- Use RTape Outdoor Durable products for applications requiring more than six months exterior life. Outdoor durability will vary depending on finishing and exterior conditions. Use of a UV protective clear coat or PSA overlaminating film will extend outdoor durability.
- Edge sealing is recommended.
- Prior to Production: Test. Don't Guess!

USING APPLICATION TAPE & PREMASK

For plotter-cut VinylEfx® lettering and graphics use a high tack application tape, such as RTape ApliTape 4075, or Conform® 4075RLA, 4076RLA or 4775RLA or Clear Choice® AT75. A mid-tack tape such as Clear Choice® AT60 works well for medium sized VinylEfx® lettering.

For digitally printed and UV screen printed wide format graphics, use a low tack premask, such as 4000, DigiMask or DigiMask Clear. These products are designed to remove cleanly from the printed image and not damage the print.

After applying the application tape, turn the graphic over so the application tape is facing down. Peel the liner from the vinyl, rather than pulling the vinyl off of the liner.

VinylEfx® films handle and can be applied just like intermediate vinyl. However, since the Outdoor Durable adhesive is not repositionable, using the "Hinge Method" during installation is a recommended option.

Firm squeegee pressure is important to create a bond to the substrate. Maintaining good squeegee pressure is also critical in forcing air from under the vinyl.

Remove the application tape after final application by pulling it against itself at a 180° angle. After removing the application tape, always re-squeegee the entire graphic, especially the edges and overlaps to prevent edge lifting. To prevent scratching the VinylEfx® film after removing the application tape, use a low-friction sleeve on your squeegee.

Edge sealing is recommended. Using a fine-tip brush, paint the edges of the VinylEfx® film with a commercial-grade product.

PRODUCT WARRANTY

All RTape products are subject to continuous quality control throughout the manufacturing process and are under warranty to be free from manufacturing defects. RTape stands behind its products and will replace for credit any defective material. Because RTape products are used for a variety of applications, the purchaser is responsible for determining the suitability and performance of this product for their specific purpose prior to use, and the purchaser shall assume all risks regarding such use.



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VinylEfx®
METALIZED VINYL

QUICK REFERENCE GUIDE

PRINTING, CUTTING &
INSTALLATION INSTRUCTIONS

Have questions? Need more information or samples?
Call us at

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Responsive . Reliable . Resourceful .

THANK YOU FOR CHOOSING VinylEfx®

Eye-catching RTape VinylEfx® metalized vinyl media give your designs a distinctive look, which attracts attention and creates favorable visual impressions. Your graphics are noticed, read and remembered. That's your competitive edge! The rich look of these metallic vinyl films is perfect for signage, POP, exhibits and store interiors.

VinylEfx® films are as easy to computer cut, weed and apply as intermediate vinyl. That's because VinylEfx® is vinyl. VinylEfx® prints like vinyl too, using a variety of screen print inks, thermal transfer systems, and latex, UV, solvent and ecosolvent inkjet printers. These films can also be steel rule die cut, thermal die cut, embossed and domed.

Properly processed and applied, VinylEfx® Outdoor Durable Series films provide up to 3 years exterior life. Durability varies depending on environmental conditions, installation procedures, finishing and product suitability to the intended application.

For interior applications, VinylEfx® Decorative Series provides indefinite indoor life and short term exterior life. VinylEfx® Decorative Series films are not warranted for exterior applications.

Edge sealing is necessary for applications, such as exposure to drastic weather, marine or winter craft applications, etc. An overlaminating film is required for printed graphics used in outdoor applications.

CUTTING

VinylEfx® cuts easily as most glossy, white calendered vinyls.

Plotter Cutting

For best cutting results, use a sharp 45° blade at slow cutting speeds with swivel type of cutters. Optimal cutting pressures vary depending on plotter type and blade sharpness. Typical pressure is between 135 grams and 165 grams.

Thermal Die Cutting

Cut at heat settings between 295 and 300 °F (146 -149°C), and dwell times between 1/4 and 1/2 second. Thermal die cut

decals have slightly raised edges, which are prone to edge lifting. Edge sealing provides additional protection.

PRINTING

Screen Printing

VinylEfx® metalized vinyl is printable using the following screen print inks:

- 3M 9700 UV inks
- Nazdar 3500 UV inks
- Sericol TMI II

Digital Printing

VinylEfx® films are printable using a wide range of digital printing technologies. Waterbased inks will not adhere properly.

Test, Don't Guess. Always test the vinyl with the ink system prior to production.

Print VinylEfx® using a profile for White Intermediate High Gloss Vinyl at lower temperatures (35-40 °C). Using high printer temperature settings can cause VinylEfx® films to expand and contract resulting in tunneling on the release liner. Settings may vary from one printer to another and from one ink system to another.

Humidity and temperature control are critical! Make sure VinylEfx® is at room temperature (70 °F/21°C) prior to printing. Colder ambient temperatures could extend ink curing time. Refer to ink manufacturer specifications.

Wiping down VinylEfx® with a lightly moistened towel prior to printing helps remove dust and other contaminants.

Heavy concentrations of ink, especially ecosolvent inks, will contribute to shrinking and edge curl of VinylEfx®. Control your ink densities.

IMPORTANT

Allow at least a 1/4" (6mm) border around any printed image to minimize shrinkage. You may need to increase the size of the border for images with heavy concentrations of ink. Never cut into the printed image.

INSTALLATION & REMOVAL

VinylEfx® films are suitable for general purpose signage applications on Clean, Smooth, Non-Porous, Flat, Vertical Surfaces. VinylEfx® will not conform well around compound curves, corrugations and rivets.

If the application surface has seams (such as truck panels), you must cut the vinyl along these seams. After cutting the film, use the edge of your squeegee to tuck the vinyl into the panel seam.

Some substrates are problematic and could cause adhesion problems. For information on special adhesive systems designed for these unique applications, call RTape Customer Service at 1-800-440-1250.

Please note the following about substrates:

- VinylEfx® will not adhere well to untreated low-energy surfaces, such as polyethylene and polypropylene.
- Some clear coats and automotive paints contain additives to repel dirt, grime, etc., which can cause adhesion problems.
- VinylEfx® and other metalized films (reflectives & polyesters) are not recommended for application to untreated metal surfaces. Dissimilarity of metals can result in galvanic corrosion.
- Know your paint system. Each paint formulation is different. Some contain additives, such as wax and silicone, which can cause adhesion problems.
- Make sure the paint system is fully cured. If not, outgassing will occur and cause bubbles underneath the vinyl. Follow the paint manufacturer's instructions for curing times.
- When applying VinylEfx® to another vinyl, a premium cast vinyl is recommended. The plasticizers in many intermediate vinyls can cause bubbles and adhesion problems later.

Surface Preparation

Prior to the application of VinylEfx® film, clean the substrate according to recommended industry standards. Failure to properly clean the application surface can result in film adhesion failure.