THE ULTIMATE GUIDE TO WINDOW GRAPHICS

This is the ultimate guide for finding out about window graphics applications. We will show you products as well as techniques in application. When you finish reading our guide, you will be fully equipped to make money in the window graphics market, even if you don't use our products....but you'll probably want to!

A SEAL® Value Report

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Appendix - GET EREE SAMPLESI

The following report was prepared using personal experience as well as online, public information. The reader recognizes that this report is for teaching purposes and any information contained herein should be verified. In addition, any inaccuracies that may occur are unintended. The reader should use the information contained herein at their own risk.

Why I Wrote this Paper

Okay, calling a paper the "The Ultimate Guide to Window Graphics" is going to be hard to live up to, but I'm going to give it a try. After reading it, I'll want to hear your opinion, so here is my email: m.rugen@sealgraphics.com.

What I am attempting here is a thorough discussion of window graphics, the products available, the techniques used to install and remove them and more. It's going to be my

ULTIMATE

contribution to the graphics market because when I did an internet search, I found lots of information but not all in one place, so here you go! Enjoy!

SEAL® Graphics

I need to give you a little background here because even though I am writing this on behalf of SEAL®, I am also mentioning lots of other products and companies. Why, because that's the right way to share information. Sure SEAL® has products that I will highlight, but if they don't fit your project then you shouldn't use them. I'm pretty confident, however, that they will work in most cases, so I'm not afraid of mentioning other manufacturers as well. Hey, you might just be getting some kind of better deal from one of them, if so keep getting it! All I am asking is that you give the SEAL® products a try as well. You never know, after learning about our products you may just become a SEAL® customer.

Windows as an Advertising Medium



Drive by just about any business and you'll see windows, lots of them; lots of sizes and locations. On some of those windows you will see advertising. Prices for cigarettes, specials on groceries, holiday discounts at an electronics store or simply the name of the business.

I would venture to say that while vehicle wraps

are great for moving advertising;

stationary window graphics get more attention. Why, because the folks looking at them and driving by them may live in the area or travel the same route to work each day. That makes them more likely to be a customer.

But that's narrow thinking. This wouldn't be the ultimate guide if we limited our thoughts to storefronts. What about homes, office dividers, awards made with glass? There are



lots of places where "window graphics" can be used other than store fronts!

Things to Consider When It Comes to Clear Surfaces

A clear smooth surface like, glass or Plexiglas™ is perfect for decorating or advertising.

Graphics can be added to either the first or second surface therefore making the graphic exposed to the elements or not. For awards the graphics can even be sandwiched between two pieces of clear media if needed. While awards are not strictly considered "windows", graphics may be applied to them in much the same manner as windows in some cases.



Surface Considerations

Static & Grime

The first concern when it comes to clear surfaces is grime. Most of these surfaces are produced in such a way as to develop a good amount of static and static attracts grime. Surface grime such as hair, dust, paper particles and dirt can ruin a good application and the look of the final product.



Plexiglas is typically covered with a protective plastic liner and once removed the Plexiglas will have a static charge. Not typically an issue, it will indeed attract more grime and care must be used to make sure the surface is clean before applying a graphic.

Static is less of an issue on windows, but these surfaces should still be treated as if they have enough static to attract grime.

For most clear surface graphic applications, static itself is not an issue and in fact can assist when applying media such as static cling. Rather it is the grime that is attracted that can be of concern. Make sure you clean the surface <u>properly</u>.

Chemical Residues

To defeat grime, the surface should be cleaned with an appropriate cleaner. I say appropriate, because some cleaners will leave a residue that fights against the properties of the adhesive that is used to allow the graphic to stick to the surface. One such enemy of adhesives is ammonia, used in

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products such as Windex® etc.

The issue with cleaning glass or Plexiglas surfaces with an ammonia based cleaner is that some of the ammonia will remain on the surface. Glue and other

adhesives cause substances to stick together by forming strong molecular bonds, so to separate items; you need to break the adhesive bonds that hold them together. Ammonia breaks these bonds well and thus releases the adhesive.

This means that if you try cleaning a window with ammonia based cleaner, your glass will sparkle but nothing will stick to it. Unfortunately, many cleaning companies use just such products when cleaning the glass, so before installing any product to any clear surface, be sure to clean it properly.

And let's not forget the oils that come from handling the surface with our hands. Some of us have oily or sweaty hands and they can leave behind human oil that will reject adhesives. Or they can simply leave behind a finger print that simply looks bad under the finished product.

Ordinary water or Isopropyl alcohol are good choices for cleaning. They will create a smoother, grime free surface without leaving residues that could affect adhesives and they get rid of those prints as well.

Here are a few "ammonia-free" homemade glass cleaners that you might try:

http://www.crunchybetty.com/battle-of-the-homemade-glass-cleaners

Environmental Concerns

In addition to surface grime and residues, the surface temperature and moisture or humidity can also be a factor in getting your graphic to adhere properly. If you have worked with a common self-adhesive vinyl, you know that a warm or hot surface will attract the adhesive quickly and a cold surface will not. Therefore, most manufacturers of window films will provide a range of temperatures for application as well as humidity conditions.

For instance in regard to static cling the following is typical recommendations:

- Operating temperature: 50°F to 95°F / 10°C to 35°C
- Recommended temperature for assured printing accuracy: 68°F to 78°F / 20°C to 26°C
- Operating humidity: 20% to 90% relative humidity, non-condensing (maximum range;
- actual range varies by material used.

In other words, warm is better than cold and the surface should not be wet.

Now, this is just one example, other media may have different recommendations. It is important to understand those recommendations not only for installation, but also for storage. Some products for window applications may have a shorter shelf life.





Surface Smoothness

One final consideration is the actual smoothness of the clear surface. While Plexiglas is quite smooth, as are most glass windows, some glass may be pitted or in fact uneven as is the case with glass brick. While most would not want to cover such surfaces, there may be times when this surface is used temporarily for ad space. Since products such as cling use the smoothness of the clear surface to assist in adhering, other products may be needed for uneven surfaces.

Understanding Window Graphic Applications

Now that we understand some of the consideration for the actual clear surfaces, it's time to talk about the actual media that can be used on these surfaces. The choice of media will include considerations such as longevity, exposure to UV, handling, printer ink compatibility and more. So let's dive into these sub-topics.

Longevity

First let's discuss longevity. Ask yourself: How long will the graphic be in place before it is removed? One day? One Week? One Month? One Year? More?

It's important to choose the right film & adhesive system to suit the amount of time the graphic will need to be displayed. This choice may also affect the overall cost of the project.



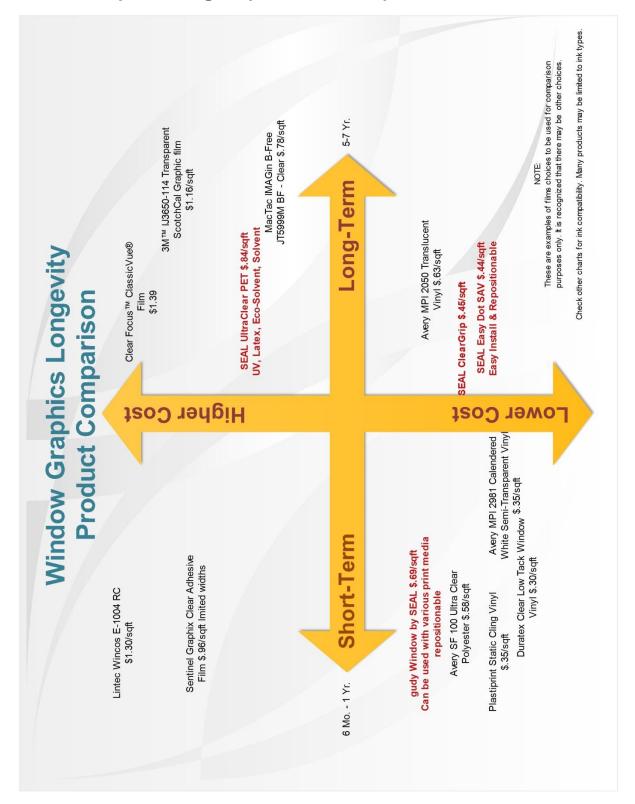
Short-term projects are those types of projects that require removability. This message is constantly changing, perhaps daily or weekly, thus the entire system used needs to be easy to install, remove, cheap and disposable.

Mid-term projects are meant to be installed for up to 1 to 2-yr and are subject to cleaning or public abuse. They need to be cheap since they will eventually be disposed of, but adhere aggressively enough to handle cleaning etc. Images may need laminating.

Long-term projects require a more permanent approach and may be subject to more environmental considerations such as UV exposure. They are meant to be permanent and not removed easily. They will definitely be laminated.

In the following chart, I've classified longevity into three groups: short-term (1-6 mo.), Mid-term (6 mo. – 2 yr.) and Long-Term (over 2 yrs.) I have also placed the names of some of the products I found online into these categories to make it easier for you to choose. I'll have other charts throughout this publication and a summary chart at the end for you to print and keep close to your phone!

Window Graphics Longevity Product Comparison Chart



Large Format Printer Compatibility

Perhaps one of the most important considerations when choosing a window media is

printer ink compatibility. And I don't mean just the inks you are using now, but those you *might* use in the future!

Ink Compatibility

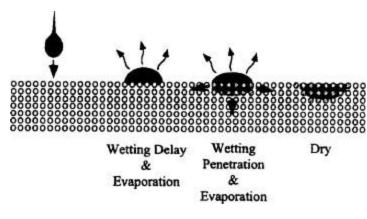
You may be using a printer that is using Eco-Solvent or Latex ink, but what will you be using 5 years from now? Could you be using UV? What I mean here is, sure,



there are window media that may work with the printer you have now, but what about the next printer you may own? Many of you may have an eco-solvent printer but latex printers are gaining in popularity. Ask yourself, will the window media I am using now work on both?

Heat Considerations

In addition to ink type, different printers have different drying methods. For instance, a latex printer uses a two system method, first drying the latex ink, and then adding additional heat to cure the latex ink. This is done so that the image can be used immediately rather than out-gassing as is needed with solvent or eco-solvent inks.



The difficulty in using latex or UV ink printers is that in order for the ink to "set", the heat used may have a detrimental effect on the media. Odd things can happen, such as yellowing of the media, curling of the media and even and effect called "re-wetting" of the ink, where the ink becomes fluid again and produces density issues.

The final result of this re-wetting can be images that appear as if they have ink that did not dry. Figure 1 demonstrates just such an effect on a clear print media that was printed using latex inks.



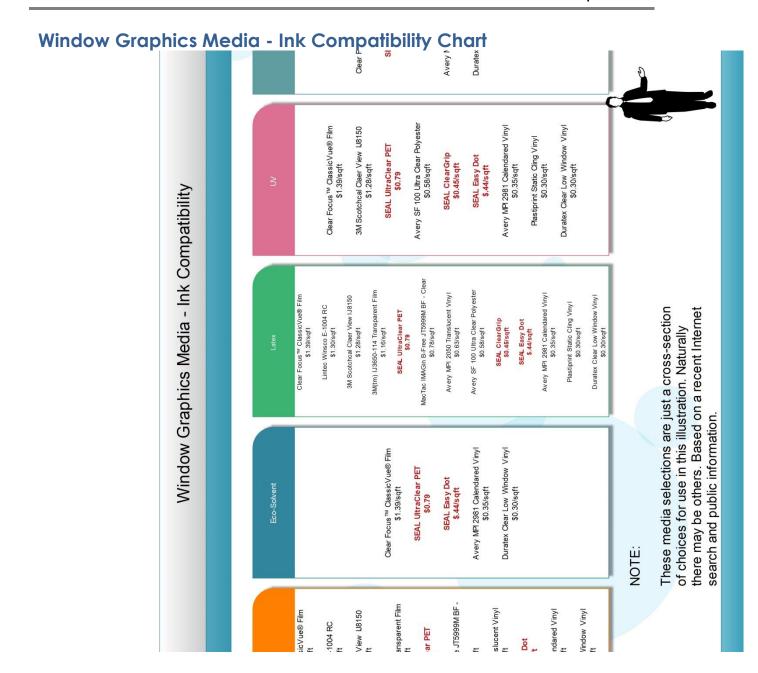
Figure 1-An example of re-wetting on Ultraflex IllumiSol®

Media Width

Media width should also be considered. Since many times the clear substrates to be covered with the printed graphic can be wide, one of the considerations is whether or not to overlap printed images. Obviously, not being forced to overlap can be a plus.

Some of the media examples shown in the longevity chart range from as little as 36 inches to as much as 60 inches.





The SEAL Window Products Difference

The chart on the previous page shows that there are very few window products that can be used with all type of inks (aqueous not included). What should be considered here is the simple fact that the SEAL products are the easiest to install and have the great durability. That makes SEAL window films the choice of growing numbers of installers!

Look, I'm trying to be fair here! Other products will work with all the ink types as well, but that's not the only consideration.

If you are going to install window graphics, it's the labor that costs the most. The time to install or re-install can be the difference between making and losing money.

Click this image for a free sample of SEAL Easy Dot

Take the SEAL Easy Dot product as an example. Because of the unique dot pattern, as seen above, results in a very easy install and removal when the time comes. That quality coupled with the durability of the product makes it a good choice for window graphics.

In addition, this product can be used for more unique applications than the other products. For instance, how about creating a rear projector storefront window?

That brings us to the next topic, tools and tips for installing window graphics whatever your product choice.



Window Graphics Application Tools Needed

Okay, now that we have covered some of the consideration for window graphics, let's now talk about some real examples of when to use certain media, and hey, this is a SEAL whitepaper so I'll be giving examples of using SEAL products with one exception; permanent outdoor, long-term signage were you will need to use cast vinyl.

Installation Tools Needed

There are several tools needed for installation of window graphics. These tools are available from any sign supply resellers but many of them can also be found at hardware stores or other sources.

Cutting Tools

Many times you will need some sort of cutting tool such as a utility knife. These tools will be used to cut printed graphics so they fit into window areas. This might include trimming an image once in place or trimming an image prior to the install. In any case be sure to get a good cutting tool to make trimming easy.

Low Friction Squeegee

Many times you will be installing your graphics using a technique that may involve wetting the surface of the substrate. Even if this method is not used, you will want to use a squeegee that has a very soft edge so that you do not scratch the finished graphic. Try to obtain a squeegee that has a felt edge. Even with this type of squeegee you may still want to add a soft cloth so that you do not scratch the graphic.

Spray Bottle and Spray Soluton

As mentioned, there are occasions where you will need to add a wetting solution to the clear substrate in order to position the graphic. There are cheap spray bottles that you can use to pump a spray solution but if you are going to do many installs, you might want to invest in a pump spray bottle.

In terms of a spray solution, there are many that you can purchase and they work well, but you can also make your own. Most of the time, the solution is used to wet the substrate and the adhesive on the graphic

so they can slide over each other and be positioned correctly.

A good solution might be: Application Fluid consisting of a water and soap solution. Fill a spray bottle with water and add a few drops of liquid hand soap (not dishwashing liquid.) Add one teaspoon of rubbing alcohol.

A Good Fiber Free Cloth

Okay, fiber fee is not the most important thing, but can help. The real idea here is a cloth that can absorb the excess application fluid used during the install. Remember, that in terms of that application fluid, at no time should ammonia based cleaners be used.

Window Graphics Installation Tips

You may already be installing permanent window graphics and if so, you may already be familiar with installation techniques, but if not, then please review some of these.



Cleaning the Surface

Prepare the surface by cleaning the surface with a solution that does not contain ammonia. Ordinary slightly soapy water is fine. I recommend you use a water and alcohol mixture for the cleaning. Alcohol alone may sometimes leave behind streaks because the alcohol evaporates quickly, so the alcohol and water mixture allows more time for the lint free rag to clean without the streaks.

It may be overkill, but I suggest using distilled water rather than tap water as some tap water can contain residues that get left behind. Here are a few links for cleaning recipes:

Make your own screen-cleaning spray on the cheap

http://howto.cnet.com/8301-11310_39-57530586-285/make-your-own-screen-cleaningspray-on-the-cheap/

Homemade Glass Cleaner

http://housekeeping.about.com/od/environment/at/cs alassclean.htm

It goes without saying that you need to make sure that you clean all the way to the corners and close to any window pane edges. These are the locations that will not stick well if not cleaned well.

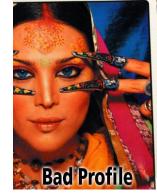
Printing Your Graphic

When printing you graphic, be sure to use the correct ICC profile for your software of choice. Many of these products are sensitive to too much ink. Using too much ink can in

fact change the properties of the film. Heat settings that are not correct can result in curling the film or yellowing the film etc.

Finding ICC Profiles

Where can you look for the correct ICC profiles? Well, many times the manufacturer will have those somewhere





on their website if they are not already included in your RIP software.

Here at SEAL we have a system called the ColorBase where we store all the profiles for all of our printable media. You can even request profiles for any RIP when you use SEAL media. You can find it using this link:

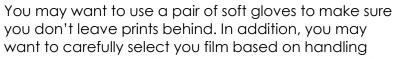
SEAL ColorBase

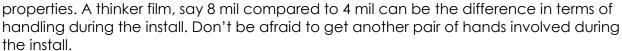
http://seal.color-base.com/

Be sure to leave a little border around your image for installing that you can trim after the install. This will allow you to "tuck in" the edges around the window frame if needed.

Handling Your Graphic

Some of these window films need to be handled with care. There are two things that can happen to them. One, they are subject to finger prints, etc. and two; they can be wrinkled or scratched during the install.







Installation

Surface temperature can be a factor during the install or removal of window graphics. Glass windows tend to absorb heat and cold. Many adhesives used on window films have a range of temperatures for best results. In fact, some of the window products, such as static cling can be very sensitive to these temperatures or even moisture on the surface. How many times have you seen tape used to hold what should be a cling?

A quick survey of the window product technical specs should give you some idea of the temperature range needed for a good install.

Removal

In terms of removal of the window graphic, temperature can affect the degree that the adhesive will remain on the glass. This is especially true with the more permanent adhesives. Interestingly, SEAL Easy Dot, which uses a dot system for the adhesive, installs and removes easier than any competitive products. The dots tend to allow for easy removal, and even if some are left behind, they are easier to clean up.

If some of the adhesive remains behind, using a razor blade and ammonia based cleaner should do the trick.

Installation/Removal Videos

I did a little research for some good videos for you to watch regarding how to install and remove graphics from windows. Below are the links I recommend. Like I said, some of these are competitive products to SEAL but I trust you are not forgetting who created this Ultimate Guide and hope you will give us your business. Regardless, enjoy these videos.

Frosted Window Film with House Number Cut Out – By The Window Film Company

This is a simple to understand video that shows a frosted window film being installed on a door glass. Good basic techniques.

http://youtu.be/LI1GpcLUJjo

Window Decal - How to Easily Apply Your Premium Grade Decal – By SignChef

This is a good technique to use if your window graphic is a little smaller than your glass surface.

http://youtu.be/O-3fyd4piBU

Easy Dot 100

This is a pretty good video showing how to install Easy Dot. No wetting of the glass surface and repositionable as well.

http://youtu.be/99P8rnxAy7w

Easy Dot Promo

Hey, it's our whitepaper, this is a shameless advertisement, but really cool to watch! http://youtu.be/uBAzJq9zdUo

Removing window graphics can be a real challenge. Here are a few videos for those of you who choose to use products that are permanent! Good luck!

Remove Decal, Stickers and Vinyl Letters from Glass

An interesting idea, but looks like a lot of labor time and could this cause window breakage?

http://youtu.be/0foMcRBEsYk

Steam Vinyl Decal and Vinyl Lettering Removal

Another interesting idea, but I think there could be issues with the heat. http://youtu.be/qllMjRkiS9M

How to Remove Old Vinyl Lettering

Okay this is a bit boring, but informative. I think after watching this you'll see the value of using window products that are more "removable" to begin with. http://youtu.be/TIZzRx0-t0E

How Much Money Can You Make With Window Graphics?

Well, now we get to the core reason for The Ultimate Guide, making money. Window graphics can make you money for a variety of reasons. You don't necessarily have to buy the substrate, it's already installed. Generally, you have a very smooth surface to adhere to, cutting labor time. Preparation of the surface is easier than other types of surfaces like vehicles for instance, no acute angles to clean. Windows graphics can be changeable and not permanent, so you get repeat business. Perhaps most importantly, there are lots and lots of windows!

Marketing and Pricing Your Services

The first step in being successful in window graphics is to market your services. That means creating a solid brochure or flyer along with a good solid sales story. It means being able to tell a customer why window graphics are important as well as why you should be the choice they make over other shops in the business. In order to maximize your success it should include a story about permanent graphics versus changeable graphics.

Pitching Permanent Window Graphics

When talking about permanent window graphics, you should of course help the customer understand that the graphics you are about to design and install will be on the window for years. That means it will be important to design the message so that it will convey the store information for years as well.

In addition, you will probably be choosing the more expensive type of self-adhesive vinyl, many ranging from \$0.95 to \$1.30 per sq. ft. Some of the window graphics may be cut vinyl and some may be printed vinyl. Just remember that installing permanent vinyl can take some time and can involve special solutions for positioning them as well as some time to rid them of bubbles after installing.

What I am driving at here is that more time and effort will be involved during the install of these permanent signs, so the cost of the media as well as the cost of the install will be higher than that of semi-permanent installs.

Based on the experience of may sign shops, the price you will need to charge for this type of signage will be between \$10 and \$12 per sq. ft. which includes design time, materials and install time. (e.g. http://www.thegraphicsdept.com/coldwellbanker/officewindownew.htm)

So if you pay between \$1 and \$3 per sq. ft. for the graphic and charge between \$10 and \$12 per sq. ft. to your customer, that's a profit of about \$9 per sq. ft. Store front windows vary in size, but let just say for example a store front window to be covered is about 4ft x 6 ft. or 24 sq. ft. That would mean you would make a profit of about \$216!

Depending on your product of choice, the install can be an hour or more or less than 30 minutes, for example when using SEAL Easy Dot or UltraClear PET. Not bad!

SEAL Unashamed Promotion

Well, I hope that you found some valuable information I this publication. I tried very hard to be fair to everyone, but since this is a publication by SEAL, I am now unashamed to promote our products!

I would suggest you try the following products and I have even included the specification sheets in the appendix. I am also including a link for you to get FREE SAMPLES of all of our products. I am certain that while we are not the answer to EVERY window graphic install, we ARE the answer to most!

Self Adhesive Digital Design

Our Self Adhesive Digital Design products give you the flexibility to tackle almost any job. The range features several different types of digitally printable materials and a number of unique adhesives: clear, reverse-print, easy-apply for windows; heavy weight, removable and repositionable for walls; permanent, removable and gray-back for floors and a whole host of other signage and retail applications. Choose the product that's right for your next job – and turn bland to GRAND!

Self Adhesive Vinyl Sell Sheet

Easy Dot

Easy Dot is an innovative new product that will save time and money when creating and installing wall, window and trade show graphics. The key to its ease of installation is the special dot patterned adhesive which creates air channels that allow for a bubble and wrinkle free installation. No special tools are needed - not even a squeegee! This 4 mil self adhesive vinyl is available in your choice of a white matte or clear (frosted translucent) finish. Use Easy Dot for trade show panels, POP and retail signage, window graphics, glass office partitions and much more.

Detailed Information

ClearGrip

Now there's an easy way to create and install window graphics, ClearGrip. Powered by the well known gudy window adhesive technology, ClearGrip features a textured adhesive, allowing for bubble free application without any special tools needed. Install your graphics in minutes! Apply MightyGrip or other white backer for additional density and opacity when printing without white ink. Use this 3.2 mil clear removable self adhesive vinyl for POP displays, retail signage and much more.

Detailed Information

WallGrip

WallGrip is the go-to product for all your indoor wall graphic projects. Easy to handle and install, WallGrip features a 6 mil polymeric vinyl with a specialty removable adhesive, designed for clean removal without residue or damage to walls. WallGrip's specialty adhesive even works when printed to the edge, or when no border is left upon cutting. Use this product for signage, retail displays, murals and trade show graphics. (Technically not a window product, but this is an unashamed promotion remember?)

Detailed Information

MightyGrip Matte and Gloss Finish with Permanent, Permanent Gray and Removable Adhesive

MightyGrip is the economy SAV solution for shorter term applications. This product is available with a permanent or a removable-permanent adhesive. The removable-permanent adhesive utilizes a new technology that allows it to be removed within one year from application with minimal adhesive residue if applied on a sound surface. MightyGrip is a calendered monomeric vinyl, 3.5 mils thick and has an outdoor durability of 3-4 years. This cost-effective option has a high opacity that can be applied over previously imaged surfaces without the use of a gray adhesive. Choose either the matte or gloss finish to create vibrant wall graphics and general signage applications for vertical, flat, and slightly curved surfaces.

MightyGrip is also available with a permanent gray adhesive in your choice of matte or gloss finish.

Detailed information

Appendix – GET FREE SAMPLES!

Okay, I will have our office send you free samples of our window products, but you need to send us some information about yourself. Just use the link below, and it will take you to a page where you fill out a short form, and we will get samples sent to you pronto!

For free samples use this link:

http://neschenamericas.hs-sites.com/the-ultimate-window-graphics-guide-free-samples

Or Click here: FREE SAMPLES

Don't have internet access? Just call our staff at 1-800-257-7325