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Doing Floor Graphics Right





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We don't have to tell you that these are unprecedented times. As your customers have adjusted to COVID-19 protocols, it's become vital for them to abide by social distancing guidelines and for you to communicate proper wayfinding. That means that floor graphics, once used for branding, promotion and simple locale identification, are now in high demand as a means to display urgent and immediate information. Uncertain patrons need to know at a glance where to go and what to do. They must also have confidence that the environment itself is safe and clean.

However, even as business owners have been quick to adopt new guidelines - and the graphics to go with them - many initial decisions have been made without much information. As they have rushed to place floor graphics in accordance with federal and local guidelines, managers and buyers haven't always been able to choose the right materials for longevity and protection from liability. We can see the results already in worn, torn, fading and peeling floor graphics.

Today, as more businesses gradually reopen, it's time to take a look at doing (or redoing) floor graphics the right way - by choosing the combination of graphic films and overlaminates that resists fading and lifting, reduces the risk of slips, and holds up under heavy foot traffic and increased floor cleaning while still removing cleanly without leaving adhesive or causing damage to the floor.



Adhesives: why they matter

Even the most striking graphics won't hold their value if they don't stay in place after installation. But that's just the first consideration involved in choosing the right adhesive for your job.

So how do you know when the adhesive is "right?"

All floor graphics adhesives should be tested for peel adhesion, shear adhesion and tack. It's imperative that adhesives perform highly in all three areas to avoid adhesive failure, edge lifting, peeling and the resulting safety hazards related to trips and falls in the establishment.

Surface considerations

Different adhesives are formulated for adhesion to a wide range of surfaces including wood, concrete, carpet, tile and many others. You don't necessarily need to do complete research on them, and it is not necessary to buy a different adhesive for every job. Some floor graphics adhesives are very versatile, tested for adhesion to many flooring substrates. They are also designed to be very thin for a low profile on smooth floors.

Considerations become a little trickier for outdoor use. Effective wayfinding for some business owners includes placing graphics on sidewalks leading into and around their establishments. For these applications, adhesives are generally thicker and should be designed specifically for hard, porous and slightly textured surfaces such as concrete.

Benefits beyond adhesion

The right adhesive can also help make installation more efficient. While most adhesives for floor graphics are pressure-sensitive - just place and press, with no mixing, beading, spreading or cleanup - they can also be pressure-activated. This makes for effortless sliding, as installers can position graphics multiple times to help ensure exact placement before activating the adhesive.

When looking at floor graphics, take the time to learn about adhesives featuring air release technology. Essentially, this involves tiny channels impressed into the adhesive when the liner is applied during manufacturing. When the liner is removed, these channels collect air beneath the graphic film and allow it to escape during installation. This feature greatly decreases the chance of bubbling, making for easy installation, smooth appearance and greater longevity.

The art and science of choosing floor graphics films

Films used for floor graphics should be chosen primarily to stand up to foot traffic. The two basic types of graphic films – cast and calendered - are each a suitable choice for floor graphics depending upon the surface. Cast vinyl film delivers the highest durability with virtually no shrinkage and is excellent for sidewalk graphics. Calendered vinyl are typically thicker than many films used for wrap applications, making for easy handling. Yet they are conformable to flat surfaces and simple curves such as floor irregularities and grout lines.



Freedom of expression

The right film will serve as a durable canvas for bright, clear and vivid designs - increasingly important as communication extends beyond branding and advertising to basic safety practices inside and outside of customer establishments. Both cast and calendered films can be produced in a range of colors and accept most common inks used in printing such as solvent, eco-solvent, UV and latex. Film finishes typically include gloss, matte or luster.

As you and your customers strive to offer more environmentally-conscious solutions, you can also choose high-performance films and overlaminates that contain no polyvinylchloride polymer (PVC). Look for materials that are UL GREENGUARD® Gold Certified, the highest level of certification for safer indoor environments.

Overlaminates: A vital choice in floor graphics

Nearly all floor graphics should be protected by an overlaminate - especially today, when their effectiveness is important for safe wayfinding and social distancing. Tough, durable and transparent, overlaminates add an important layer of protection that maximizes investment in the overall product. They resist moisture, scuffs and scratches, preserve ink applications and help ensure the graphics meet estimated performance life. This is especially significant as most businesses are adopting enhanced - and more frequent - cleaning protocols, exposing the graphics to additional wear and tear.

Like films themselves, overlaminates can be either cast or calendered. They are available in gloss, luster or matte finishes that can preserve and even highlight the graphics beneath them. For outdoor applications, overlaminates are available that provide excellent resistance to UV rays to help prevent sidewalk and other outdoor graphics from fading.



Overlaminates are also important for helping reduce the risk of slips and falls. Look for overlaminates that meet the UL 410 Standard for Slip Resistance of Floor Surface Materials. This certification includes testing to determine a material's static coefficient of friction, which indicates the product's level of slip resistance. Overlaminates are available for applications such as sidewalk graphics to provide skid resistance that meets specifications for outdoor use.

Keep in mind that many outdoor materials feature direct-print graphics with a rougher texture and eliminate the need for an overlaminate - but at the cost of quicker fading or damage to the printed image.

When – and how – to replace your floor graphics

As many businesses are discovering, quickly-installed floor graphics don't last very long. Even if they've been sourced from a floor graphics manufacturer (as opposed to more do-it-yourself methods), many floor graphics are designed for short-term promotional messaging. They are easy to put down and easy to remove, and they don't hold up under long-term traffic.

Long-term floor graphic films and overlaminates should all have a published estimated performance life. Performance will vary by surface and environmental conditions. For this reason, it's very important to note that published EPLs will be based on testing conducted on flat, vertical surfaces such as walls or windows - actual performance life for floor applications will be lower. In general, you should think about replacing these materials every year. Note: Consult the manufacturer's technical documentation for specific information.

A note about floor graphics removal

If your customers have put hastily down temporary floor graphics, they should be replacing them every time the material lifts or tears to avoid hazards related to trips and falls - a time-consuming effort.

The flip-side of this is that floor graphics engineered for longer performance life can also include adhesives that require considerable time and effort to remove. (Many of us may never know what that means until we find ourselves scraping adhesive residue from flooring without damaging the substrate beneath.)



The best floor graphics will feature adhesives designed for a strong bond throughout the estimated performance life, and also clean removal. Most manufacturers will provide technical information - in writing, or through technical service departments - that specifies that the adhesive will remove cleanly from specific substrates. Basic removal involves simply peeling up the graphic at a 90-degree angle, starting at the corners, and removing any residue with a putty knife. It is often a good idea to heat the surface first with a heat gun to soften the adhesive beneath.



Let's do floor graphics right

Unlike any other company, 3M has decades of technological expertise in adhesives and films - two of the core technology platforms on which the company has built itself for more than a century. 3M invented pressure-sensitive adhesive tapes more than 90 years ago, and today that knowledge translates to the latest innovations in high-performance floor graphics materials. This includes our 3M™ Controltac™ pressure-activated adhesives for efficient, effective graphics installation and our 3M™ Comply™ anti-bubbling adhesive technology.

Over the years, we have also applied our breadth of technologies to a wide range of businesses and industries. Graphics professionals can be assured that all current and emerging 3M materials are tested across a wide range of environments. For example, we can internally test our graphic films and overlaminates under a range of anticipated conditions using a range of floor buffers and scrubbing equipment.

Featured 3M graphics solutions:

For a wide range of indoor surfaces:

3M™ Controltac™ Print Film 40C
3M™ Scotchcal™ Luster Overlamine 8509
3M™ Scotchcal™ Matte Overlamine 8510M

For high traffic indoors:

3M™ Scotchcal™ Luster Overlamine 3645

For outdoor sidewalk graphics:

3M™ Scotchcal™ Graphic Film 3662
3M™ Scotchcal™ Matte Overlamine 3647

For non-PVC applications:

3M™ Envision™ Print Film 48C-20R
3M™ Envision™ Matte Wrap Overlamine 8050M

Tips for choosing, installing and using floor graphics

Understand the entire need.

Doing floor graphics right depends on a complete inventory of each customer's indoor and outdoor applications. This should include the number, orientation and substrates of all floors as well as the number and the positions of anticipated graphics. It should also include specific solutions (adhesives, films, overlaminates) to address each flooring area. You should also understand how long the floor graphics should last. (Note: most estimated performance life are based on testing conducted on flat, vertical surfaces; performance on floors will be lower. Consult your manufacturer's technical information for estimated performance life.)



Wherever possible, include an overlaminate.

Even the best floor graphic will have much less estimated performance life than a graphic for a wall, window or other area that is not exposed to direct foot traffic. To ensure that your customers get the most value from their floor graphics, recommending the correct overlaminate is crucial.

Design graphics with rounded corners.

Keep in mind that even with an overlaminate, sharp angles are especially prone to wear and edge lifting over time. Design your floor graphics with rounded corners. If the ink pattern itself contains squares or other angled elements, place it on a transparent

background that includes rounded edges. This will help ensure that floor graphics will reach their estimated performance life.

Prepare the floors.

A well-prepped floor is vital for long-term adhesion and to avoid small particles from getting trapped below the graphic surface. If the floor is freshly waxed, be sure that installers allow at least 24 hours before applying graphics. They should clean the entire area with non-aggressive detergent. Then they should apply a 70 percent rubbing alcohol with a lint-free towel. They should avoid letting the solution evaporate; instead, they should dry it thoroughly with another lint-free towel.

If possible, place graphics under floor finishes.

If your customer is using a floor finish and requires long-term floor graphics, it's best to install floor graphics first before the finish is applied. Graphic films placed under commercial floor finishes will last longer and require less maintenance.

Fill cracks and crevices.

Graphics for sidewalk applications are engineered for rough, porous surfaces. That said, it's very important that cracks and other flaws are covered or filled wherever graphic adhesion can be compromised.

Provide instruction for floor graphics maintenance.

Good floor graphics will stand up to multiple, repeated floor cleanings using standard liquid and mild abrasive cleaning methods. However, to ensure longevity, they should not be subjected to cleaning procedures involving aggressive floor pads or floor burnishers. Customers who currently use or have upgraded to aggressive floor cleaning products should be advised to clean around floor graphic applications or install the graphics underneath floor finish.



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