Installation Bulletin for LG Hausys Digital Printing Media

Introduction

LG Hausys offers a wide range of self-adhesive digital printing vinyls. Matched components like Banners and Laminates are part of the product range. Please follow our Technical Installation Bulletins for preparation and Application in order see best results. The LG Hausys print vinyls are supplied with permanent pressure sensitive adhesive. It's designed for solvent-based inkjet printing and guarantees from to 2 to 8 years of outdoor durability. The products include an air egress technology for easy installations with grey, solvent-based adhesive upon request.

Storage and processing conditions

LG Hausys Pressure Sensitive Adhesive products are delivered in rolls which should be stored either suspended or standing on the roll blocks provided in a cool, dry place. Avoid exposure to sunlight. Prior to the production process the PSA films should be accommodated to the humidity and temperature prevailing in the processing area. The optimal conditions are a relative humidity of 50% to 60% and a temperature range between 18°C and 22°C. Higher variations of the above mentioned conditions can lead to a higher degree of shrinkage of the release paper. The result is a limited flatness of the self-adhesive material and dimensional changes when cut. Please refer to our Technical Product bulletins on our website http://sign.lghausys.eu as well.

Fabrication and Printing

Printing, Drying and Laminate

Treat the LG Hausys Digital Print Media with care. Use cotton gloves to prevent fingerprints to the surface of the film. Check the surface quality prior to the printing process.

Use solvent-based printing for optimal print quality. Recommended printer settings and ICC profiles are available for download at http://sign.lghausys.eu. After printing, allow the ink to properly dry at least 24 hours to 48 hours before laminating, cutting, or applying the graphic. Laminate with LG Hausys Protective Laminates to prevent vinyl and/or print damage from scratches, smoke, fumes, etc.

Warranty will be applied to finished graphic appearance defects such as excessive fading, discoloration (including that due to mildewing or wicking on flexible substrates), peeling, gloss changes, excessive dimensional change or loss of adhesion that makes the graphic virtually unsuitable for its intended purpose.

Surface Preparation

1. Surface must be completely cleaned 1 day prior to product application. Thoroughly clean vehicle by using neutral detergent with no wax content. Automatic washing is not recommended as it may prevent good film adhesion. If the surface of the vehicle has been painted, wait at least 3 weeks for paint to dry before applying the film.
2. After cleaning, completely dry off the vehicle surface to remove all moisture. To speed up drying, use lint-free cloth or paper towels that leave the surface lint and dust-free.
3. After drying, check for any remaining wax, polish, or grease residue on the surface and corner areas of the vehicle. In particular, check whether any road tar or insect remains have been completely removed. If the vehicle has not been thoroughly cleaned, use a solvent cleaner to remove road tar. Always test vehicle finish for solvent, cleaner, or chemical compatibility first. After using a solvent cleaner, vehicle surface must again be completely dried before product application. Please make sure that the squegee pressure on the sheet is at least 8kg when wet bonding. Otherwise, you can start seeing the paper separating at the corners and an increased build-up of blisters due to residual moisture.

4. Gas bubbles may form between the film and the surface if any solvent residue remains as a result of improper cleaning or if the lacquer on the surface is too fresh. Allow at least three weeks to elapse before applying the film to lacquer which has been air-dried or baked. Isopropanol is recommended as the cleaning agent as other agents may, under certain circumstances, attack the lacquer or reduce the adhesive strength of the film. For surfaces which tend to outgas, such as polycarbonate products, we recommend the following steps. Clean the surface, apply a piece of film and store it at + 60°C for about 24 hours.

Application Temperature and Environment

1. Application must be administered indoors where temperature and humidity can be controlled.
2. The optimal air and vehicle surface temperature for film application is 18°C ~ 22°C. If the air and vehicle surface is lower than the recommended temperature, sufficient stretching may not be obtained and the initial adhesion of film may not be strong enough to last permanently because of the rapid drop of the film temperature. If the air and/or vehicle surface temperature during application is excessively high, the initial adhesion may be too strong and can result in problems where the film may over-stretch, and trapped air may not successfully release.
3. In order to achieve sufficient bond between the film and vehicle, the vehicle must not be exposed to cold or wet climate for 24 hours after film application.
4. The above instructions must be complied with to prevent the film from developing shrinkage or film memory problems.

Application Techniques

1. Secure film to the required position by using masking tape. Make sure to position the film with at least 2-inches from the edges of the area for application.
2. Hold up the graphic on one side first and remove only half of the release paper. Then, place the graphic on the vehicle surface and stretch it over the areas to be covered. Repeat above installation procedures for remaining portion of graphic.
3. Apply film using a felt-tip squeegee. For application on curved areas, soften the film before application by using a heat gun to heat up the surrounding areas of curvature and the film to the temperature of approximately 80°C. Continuous use of the heat gun in the same spot may cause damage to the film; therefore, position of heating must be constantly changed.
4. When application is completed, cut off the edges after film has sufficiently cooled down. If the film is cut along the edges of the vehicle, the cut edges may become loosened or the film can shrink when washing the vehicle afterwards. Therefore, the edges must be cut with some reserves left and tucked inside.
5. For areas with severe curvatures, sufficiently stretch and soften the film with a heat gun before application. On areas with protrusions and indentations, apply film along the surface without stretching or forcing into position. Finish up the corner areas by pressing down on the film using the round tip of a squeegee.
6. If air bubbles remain after application, use an air release tool to remove only the large bubbles, as smaller bubbles disappear within several days when exposed to sunlight.
7. The above instructions must be complied with to reduce the possibility of application failure or film memory problems.
8. When applying film to film, make absolutely sure that only films of the same manufacturer and the same type are put on top of each other (monomeric film on monomeric film and polymeric film on polymeric softened film). Caution! Certain thermal insulation glazing systems may be damaged by self-adhesive films due to thermal stresses caused by extreme temperature fluctuations.

After Application

1. Wait three days after graphics application to wash vehicle. Wait three weeks after application before polishing or waxing vehicle.
2. When washing the vehicle, do not use high-pressure cleaners or corrosive chemicals.

Removal

1. To remove film after use, temperature of both air and vehicle surface must be above 10°C. Removal at lower temperatures may be more difficult as the film can become brittle and/or leave adhesive residue traces.
2. Using a heat gun, etc., heat up the part of film to be removed to a temperature of approximately 70°C. Lift up the edges of the film and remove it, maintaining a 90° angle between the film and vehicle surface.
3. Application of film to a surface where the coating has not been sufficiently hardened may cause damage to the surface.
4. Residue remaining after removal of film can be cleaned by using solvent or a designated remover. Always test vehicle finish for solvent, cleaner, or chemical compatibility first.
5. Defects will only be recognized as a defect only on products sold as “removable” and then, when the residue remaining is more than 30%. This warranty will only apply to LG Hausys’ recommended removal methods. LG Hausys should be notified of warranty claims no later than seven (7) business days after the attempted removal.