PRODUCT BULLETIN

APPLICATION GUIDE

Protective film:

STRUCTURED LAMINATES

REQUIRED EQUIPMENT

- Laminator
- Tesa® 7476 adhesive tape
- HEXIS'O cleaning agent
- ADHESIVE REMOVER
- FINAL CLEANER
- Squeegees of your choice from the catalogue
- PISTHERMIQ heat gun
- ROLLRIV roller
- Different HEXIS application tools

FEATURES

Range of embossed, clear films, which are coated with pressure-sensitive acrylic adhesive. For indoor or outdoor use (see chart 1).

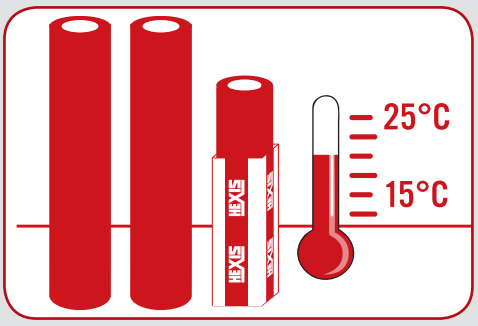
	PCAMPGB	PCWOOD	PCWALL	PCBRUSHED	PCGATOR	PCCARBON	VWOOD
Application to:							
Coloured films (like HX20000, etc.)	✓	✓	✓	✓	✓	✓	✓
Printable films	✓	✓	✓	✓	✓	✓	✓
Flat surfaces	✓	✓	✓	✓	✓	✓	✓
Moderated 3D surfaces	✓	✓	✓	✓	✓	✓	
Properties:							
Antimicrobial	✓	✓					
Use:							
Indoor	✓	✓	✓	✓	✓	✓	✓
Outdoor			✓	✓	✓	✓	✓

Chart 1

STORE YOUR FILMS UNDER APPROPRIATE CONDITIONS

Keep the films away from any major source of heat (radiators and heaters, direct exposure to sunlight, etc.).

The shelf life of this film is 1 year when stored in its original packaging at a temperature ranging from 15 °C to 25 °C (from 59 °F to 77 °F), with relative humidity between 30 % and 70 %.



CONTENT

Application methods are based upon HEXIS' experience and are non-restrictive. Comply with instructions to ease application of HEXIS films.
HEXIS also offer training sessions for beginners and professionals to achieve optimum results.

PREPARING YOUR APPLICATION SURFACE:

HEXIS laminating films can be applied to a wide variety of substrates as long as the target surface is clean, dry, smooth, non-porous and free from any traces of oil, grease, wax, silicone or other contaminants (see chapter 3).

Do not forget to carry out a preliminary trial on a small surface to check that the substrate remains undamaged. Also verify the film's deformation limits and always follow the instructions given in the technical data sheets available on our website.

1. RECOMMENDATIONS:

› In the case of a total wrap, the structured laminates may be used to cover flat surfaces and moderated 3D surfaces.

› For protecting plotter vinyls, the structured laminates may be applied to non-structured films using a cold laminator. The compound can be cut using a plotter, except compounds composed of structured laminates + Super Chrome films (see technical data sheets of Super Chrome films). After cutting, it is possible to transfer with the HEX860 tape.

› For protecting HEXIS digital printing films, the structured laminates may be applied to the solvent, eco-solvent, latex and UV inkjet printed films.

Caution: Before laminating a printed film, the optimal drying time for the inks must be respected:
- for printed cast films: 48 hours;
- for printed calendered films: 24 hours.

› The best adhesion of the laminating films is achieved after 24 hours of contact.

2. PRELIMINARY TEST OF THE APPLICATION SURFACES:

Before any application, the installer must first inspect the final substrate and the paint to which the film or compound will be applied.

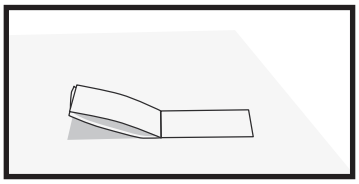
The installer and the customer are responsible for the suitability evaluation of the target surface to be covered.

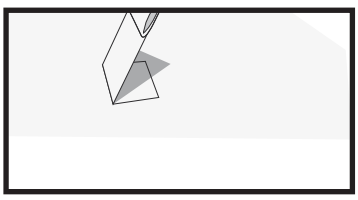
2.1. Preliminary inspection of the substrate:

› Any fresh new paint must be dried for at least 7 days at 25 °C (77 °F) in order to degas completely. A degassing test must be carried out before applying the film.

› Any old, powdery or flaky paint must be sanded and renewed before application and must undergo a tear-off test.

2.2. Tear-off test:





Using a TESA® 7476 adhesive tape, or similar, apply it to a surface of 2.5 cm x 5 cm (1 in. x 2 in.) plus some overhang material for easier removal. Fold and promptly tear it off perpendicularly to the substrate surface. No traces should remain on the ripped-off adhesive tape. Repeat this process in several places.

> On request, HEXIS can provide you with a Tesa® adhesive tape in 2.5 cm x 5 cm (1 in. x 2 in.) size.

2.3. Degassing test:

(For checking) Use a square of around 15 cm x 15 cm (6 in. x 6 in.) of self-adhesive polyester or of the film to be applied. Wait for 24 hours or 2 hours at 65 °C (149 °F). The appearance of bubbles indicates that the substrate has not sufficiently degassed. Therefore, this process should be repeated after a couple of days; or the procedure described below should be carried out.

2.4. Degassing procedure with flame treatment:

(Polycarbonate, translucent or diffusing methacrylate, expanded PVC, etc.)

This method consists of changing the surface tension of a substrate by swiping it with the flame of a gas burner. Using the flame's blue tip, proceed evenly with fast sweeps horizontally and vertically along the whole substrate surface.

⚠ *MOVE THE FLAME IN SWIPING MOTIONS ON THE SUBSTRATE (RISK OF DESTROYING THE SUBSTRATE IF A FIXED POINT IS HEATED MORE THAN A SECOND).*

The film must be applied right after this treatment as this light surface treatment disappears after a few minutes.

> *HEXIS are not liable for any bubbles caused by degassing.*

3. CLEANING:

3.1. Films required to be laminated:

Make sure that there is no dust on the film or laminator rolls.

If necessary, use a lint-free cloth to remove any dust from the rolls or film to be laminated.

3.2. Flat surfaces:

Cleaning of the substrate is required before performing the application. It should always be assumed that the substrate is contaminated with dirt. Some residues or contaminants may not be visible; however, they may impact the adhesion of the film.

⚠ *Before using any cleaning liquids or chemicals, please refer to the Technical Data Sheets and Safety Data Sheets available for download on our website: www.hexis-graphics.com.*

3.2.1. Clean surface appearance:

Before applying the film to the surface to be covered, it is recommended to clean it with the gentle HEXIS'O solution. Dry it with a clean, lint-free cloth.

HEXIS'O
Cleaner and degreaser

3.2.2. Soiled surface appearance:

Clean the substrate with a cloth soaked with the powerful cleaning agent ADHESIVE REMOVER to remove adhesive residues and other contaminants (diesel, oil, tar, grease, graffiti traces, etc.).

⚠ *Work in a ventilated area. Wear protective gloves and goggles.*

Run a test to make sure of the compatibility of the product and the substrate on a small, inconspicuous area of the surface to be treated. Indeed, certain plastic materials might be damaged by the ADHESIVE REMOVER.

Adhesive Remover
Powerful cleaning agent

› For surfaces soiled by stubborn contamination, spray the cleaning agent directly onto this area and clean it with an abrasive sponge.

Let it work for some minutes. Spray the ADHESIVE REMOVER again on the soiled surface, then wipe it with a clean cloth or squeegee.

Final Cleaner
Finishing cleaning and degreasing agent

› When the substrate is clean and dry, clean it with the FINAL CLEANER .

4. FILM APPLICATION:

Structured laminates must be applied according to the dry method.

4.1. PURE ZONE® hologram logo:

HEXIS supply PURE ZONE® holograms so that you can label surfaces protected by structured antimicrobial laminates (PCAMPGB and PCWOOD) and therefore indicate premises containing such surfaces to users.

Affix this logo in a corner of the surface to be protected before applying the laminate PCAMPGB or PCWOOD.

4.2. By laminating:

Due to the highly structured surface of the embossed laminates, some bubbles may appear and remain underneath the film during lamination.

The appearance of the compound can be improved by optimising the following lamination parameters:

- Ensure maximum pressure between the lamination cylinders.
- Set a slow lamination speed.

Advice: In all cases, read the laminating machine's instructions carefully and carry out a preliminary application trial.

› After installation, the final surface aspect can be improved by heating the film to +60 °C (+140 °F) and by applying it using a ROLLRIV foam roller.

4.3. To moderated 3D surfaces:

The following instructions concern the application of either the film alone or a structured laminate compound.

Caution: For structured films applied alone, in case of heating them before tension, the maximum heating temperature must range from 30 °C to 40 °C (86 °F to 104 °F).

Heating phases that are too long or too focused may lead to the film tearing off.

Once stretched, the film must not be heated until its application to the substrate.

If the shape of the flat surface to be covered is suitable, it is recommended to apply the film using one single piece of vinyl.

Please follow the instructions below for covering a horizontal table or tray surface and its edges.

› Put on gloves.

› Prepare a piece of film slightly larger than the surface to be covered, while taking into account the parts to be folded over the edge of the tray.

› Peel off approximately 10 cm (4 in.) of the liner. (FIG. 01).

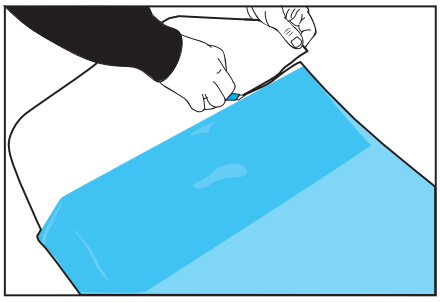


Figure 01

› Start the film application from one of the edges of the horizontal table or tray surface. (FIG. 02)

› Apply the film with the squeegee (covered with felt beforehand), forming an angle of 45° between the surface of the squeegee and the vinyl. Move the squeegee from the centre towards the edges of the vinyl.

› Progressively remove the liner and proceed with the vinyl application, to the complete surface of the horizontal table or tray, moving the squeegee as described above.

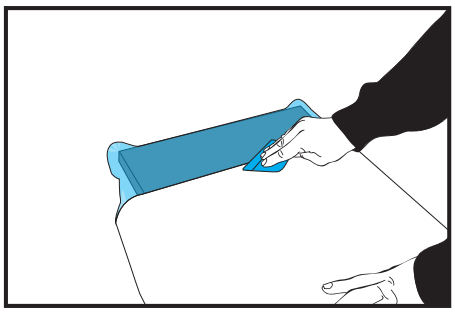


Figure 02

› For perfecting the finish of the compound and removing remaining air bubbles: heat to 60 °C (140 °F) and apply the ROLLRIV foam roller over the entire film surface.

› Once the application to the horizontal surface is finished (FIG. 03), proceed with the cuts to wrap the table edges.

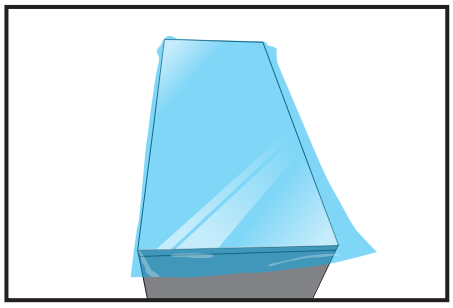


Figure 03

› Cut the film diagonally, starting from the corner of the table. (FIG. 04)

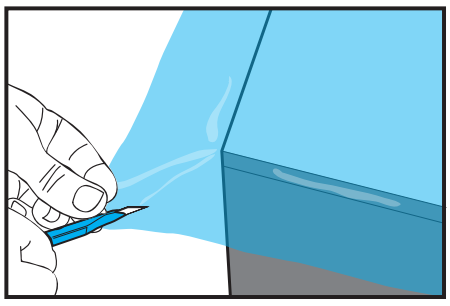


Figure 04

› Apply the film to one of the table's edges by folding the film edge over the perpendicular angle. (FIG. 05)

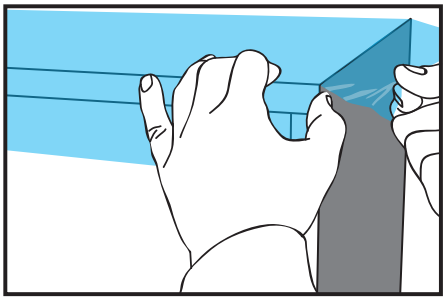


Figure 05

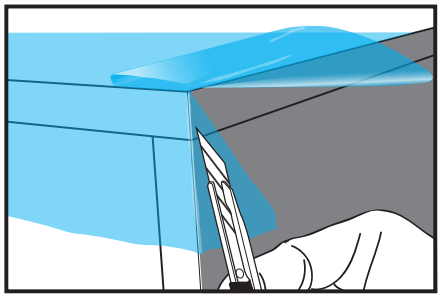


Figure 06

› Cut any excess material, leaving only approximately 1 mm to 2 mm (0.04 in. - 0.08 in.), (FIG. 06) then cover the adjacent edge.

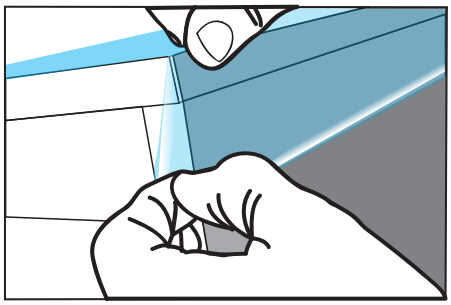


Figure 07

› Apply the film to the second edge and wrap the corner with a slight overlap of both films. (FIG. 07)

› Proceed in the same manner on the other three corners.

› If the shape of the table or tray is suitable, it is recommended to fold the film over 1 cm to 2 cm (0.39 in. to 0.79 in.) under the horizontal plate.

5. USE OF THE HEAT GUN:

You have used the heat gun for application to moderated 3D surfaces.

Once the application is finished, heat once more all the parts which have undergone deformation using the heat gun.

The heating temperature must range from 80 °C to 90 °C (from 176 °F to 194 °F). Check it using the laser thermometer.

⚠ *Caution: In the case of structured films, this reheating step must be carried out with care (average setting of the heat gun's air flow, keep the heat gun moving all the time, increase the distance between the heat gun and the film).*

Heat accelerates the bonding process of the pressure-sensitive adhesive. Thus, the vinyl's shape memory will be definitively killed.

6. CLEANING AND MAINTENANCE OF THE FILM:

⚠ *However, the film should not be cleaned within the first 24 hours following application of the laminate or complex as this can affect the adhesive strength that may result in the film peeling off.*

› The film can be cleaned or disinfected by all conventional cleaning methods, using non-abrasive accessories, cleaning products, detergents or products currently used in healthcare environments.

The antimicrobial activity of the PCAMPGB and PCWOOD films is maintained, even after 365 cleanings with water, alcohol or a cleaning / disinfectant product (ANIOSURF type (ANIOS Laboratories)).

7. REMOVAL PROCEDURE:

Structured laminates feature a permanent adhesive and therefore their removal, when they have been applied to flat surfaces, needs some attention. Nevertheless, by following the instructions below, the removal will be relatively easy.

› For substrates allowing the use of heat, use a heat gun, start from a corner and heat the film to a temperature of around 60 °C (140 °F) (laser thermometer).

› Gently lift the corner with the cutter without damaging the substrate, and gradually remove the previously heated film; the film should form a 70- to 80-degree angle with the substrate.

A more or less wide angle will cause the film to break more easily.

› Always proceed gradually by heating small areas while carefully removing the film so as to limit the risk of leaving any adhesive on the substrate or tearing the film.

› Continue to carefully heat and peel off the film gently until it is completely removed while keeping a watchful eye on the heat applied, on the pulling angle of the film, and the pulling speed.

› If any adhesive remains on the substrate, take a cloth soaked with our ADHESIVE REMOVER and rub the surface until all traces disappear.

Before using any of our liquids, please refer to the technical data sheets available on our website at: www.hexis-graphics.com.

www.**hexis-graphics**.com