

PRODUCT BULLETIN

APPLICATION AND REMOVAL LATEX FILM HEX'PRESS

HXL300WG2



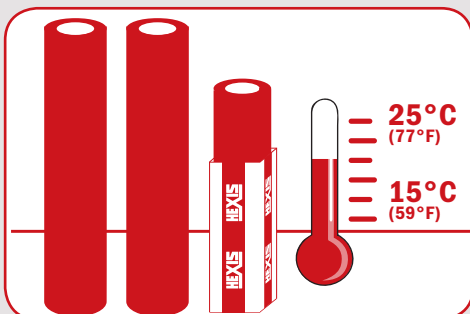
ESSENTIAL ACCESSORIES

- › Tesa® 7476 adhesive tape
- › Masking tape
- › HEXIS'O surface cleaning agent
- › CLEAN HEXIS degreaser
- › ND45 strong cleaner and degreaser
- › Assorted squeegees
- › PL300CG2 latex laminate
- › VR 7077 edge sealing varnish
- › Electric heat gun
- › MALCOV HEXIS toolbox comprising:
 - › Laser thermometer
 - › Magnets
 - › Measuring tape
 - › Craft knife
 - › Ten 30° cutter blades
 - › Cotton gloves
 - › Plastic squeegee
 - › A5 sheet size felt squeegee
- › DECOLL'VIT adhesive remover

ALWAYS STORE VINYL ROLLS AT THE RECOMMENDED CONDITIONS

Keep the film away from sources of heat (radiators, exposure to direct sunlight...): the ideal storage temperature is between 15 and 25°C (59 and 77°F). Store in an atmosphere with low humidity (30 to 70% relative humidity).

Keep your films in their original packing. Each opened roll must be stored vertically or suspended from the core in order to avoid pressure marks on the contact surface.



CHARACTERISTICS

The HXL300WG2, made up of a 100 micron Latex film, is perfectly suitable for flat or slight curved surfaces. It adheres particularly well to glass, steel, aluminium, PVC, melamine, except grained surfaces or surfaces covered with acrylic paint.

Because of its superior technical performance and its high flexibility it may be used for flat and slightly curved surfaces requiring a certain conformability: panels, windows, vehicles.

The advanced HEX'PRESS technology allows you to reduce time required for installation. The technology also allows to conveniently reposition the vinyl however the film still needs to be firmly applied to achieve optimum adhesion of the film on the substrate.

PREPARING THE TARGET SURFACE

HEXIS films can be applied to a wide variety of substrates under the condition that the target surface is clean, dry, smooth, non-porous and without any traces of oil, grease, wax, silicone or other contaminating agents. In order to guard against all eventualities, always assume that the substrate is contaminated and requires cleaning (cf. chapter 3).

Do not forget to carry out a preliminary test in a small inconspicuous area to check that the substrate does not deteriorate.

SUMMARY

1 Recommendations

2 Preliminary examination of the substrate

- 2.1 Tear off test
- 2.2 Outgassing test
- 2.3 Outgassing procedure

3 Cleaning

- 3.1 Clean surface appearance
- 3.2 Soiled surface appearance
- 3.3 Special cases

4 Laminating the HXL300WG2

5 Application of the HXL300WG2

- 5.1 First steps and application on flat surfaces
- 5.2 Slightly undulated surfaces
- 5.3 Slightly concave surfaces
- 5.4 Slightly convex surfaces
- 5.5 Towards full wraps

6 Edge sealing tape or sealing varnish

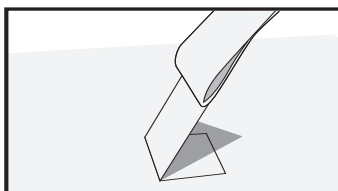
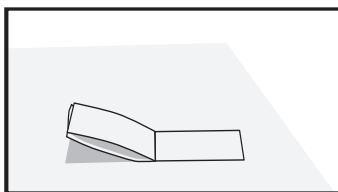
- 6.1 Sealing tape
- 6.2 Sealing varnish

7 Cleaning and maintenance

8 Removing the vinyl

1. RECOMMENDATIONS

- › Avoid applying the film on unpainted areas such as plastic profiles and unpainted bumpers.
- › The HXL300WG2 vinyl achieves optimum adhesion after 24 hours of contact.
- › The HXL300WG2 film is not a PVC film. Its behaviour during installation and under heat is thus different from our PVC films. In particular, the temperature range between softening (temperature to work the film) and the break-up temperature may be narrower than that of a vinyl film.
- › The HXL300WG2 film is a fragile product. It may give the impression of being more brittle than vinyl films. The HXL300WG2 should be applied and handled with care.
- › In the case of painted substrates, self-adhesive media must only be applied onto the undamaged original paintwork. If the paint is not original paintwork and/or if it is damaged, the application and the removal are at the installer's risk.



2. PRELIMINARY TESTING OF THE TARGET SURFACE

- › Fresh paint must dry for at least 7 days at 25°C (77°C) in order to outgas completely. A outgassing test must be carried out before the application of a self-adhesive film.
- › Older paint or paint that has become dusty or flaky must be sanded and restored before the application and a rip test should be carried out.

2.1 Tear off test

Using a self-adhesive tape of the type Tesa® 7476 or similar, apply on an area of 2.5cm x 5cm (1in x 2in) plus some extra length to hold with fingers. Fold and tear off with a swift movement at a right angle to the surface. The adhesive tape should not show any traces. Repeat the test at different places.

> HEXIS provides, on request, samples of the 2.5cm x 5cm Tesa® tape.

2.2 Outgassing test

Use a 15cm x 15cm (6in x 6in) square of adhesive polyester or of the film to be applied. Leave for 24 hours or 2 hours at 65°C (149°F). The appearance of bubbles indicates that the substrate has insufficiently outgassed. Repeat the test after a couple of days or else use the method described below.

2.3 Outgassing by flaming (polycarbonate, translucent or diffusing metacrylate, expanded PVC...) consists in modifying the surface tension of a substrate by wiping it with the flame of a gas burner. Proceed in even and fast sweeps, both horizontally and vertically over the entire surface of the substrate (use the blue tip of the flame).

Attention: do not stop the movement of the flame over a single spot for more than 1 second (risk of damage to the substrate). The film must be applied immediately as the effect of this type of gentle surface treatment disappears after a few minutes).

 HEXIS is not liable for any bubbles due to outgassing.

3. CLEANING

Depending on the condition of the substrate there are three possible cleaning methods:

3.1 Clean surface appearance

Before applying the film on the target surface, we recommend you clean with a gentle cleaning solution such as HEXIS'O. Dry with a clean lint free cloth.

3.2 Soiled surface appearance

Clean the substrate with a cloth soaked in CLEAN HEXIS cleaner degreaser and wipe dry before evaporation.

If the substrate is contaminated with persistent polluting agents such as diesel petrol, tar or rubber, use a cloth soaked in a strong degreaser such as HEXIS ND 45. If necessary, use a soft non-abrasive scraper beforehand.

In all cases wash the concerned areas with the HEXIS'O solution.

3.3 Special cases:

Remember to adapt the methods for the surface preparation to the type of surface and their condition. Thus, painted surfaces must be dry and hardened, baked paints must have cooled down. Air dried paints or vehicle paints require 7 to 10 days of drying before the application of a film. In the case of bare metallic surfaces clean the substrate with a cloth

HEXIS'O
cleaner and
degreaser



CLEAN HEXIS
cleaner and
medium
degreaser



ND45
cleaner
and strong
degreaser



soaked in HEXIS' O solution.

The nature of the film to be applied also determines particular treatments (cf. technical data sheets available on www.hexisgroup.com).

4. LAMINATION

We recommend you laminate the HXL300WG2 film with the PL300CG2 laminate.

Ensure that the film is dry before application: the printed HXL300WG2 is touch dry after 10 minutes at the most, however it may be necessary to wait for 24 hours before applying, laminating or cutting the film. To ensure the solvents evaporate completely leave the cut sheets to dry in ventilated racks.

5. APPLICATION OF THE HXL300WG2

Because of its special HEX'PRESS liner the HXL300WG2, is always applied using the "dry" method. Such a technology allows easy repositioning of the vinyl on the substrate but still requires strong squeegeeing down of the film to achieve optimum adhesion of the HXL300WG2 on the substrate.

Before application of a compound HXL300WG2 + PL300CG2 or of the film on its own, ensure that all surfaces are clean, paying particular attention to critical areas such as corners, edges.

The application temperature must be between 20°C and 25°C both the environmental temperature as for the temperature of the substrate. Ambient humidity may also influence the adhesion of the film on the substrate.

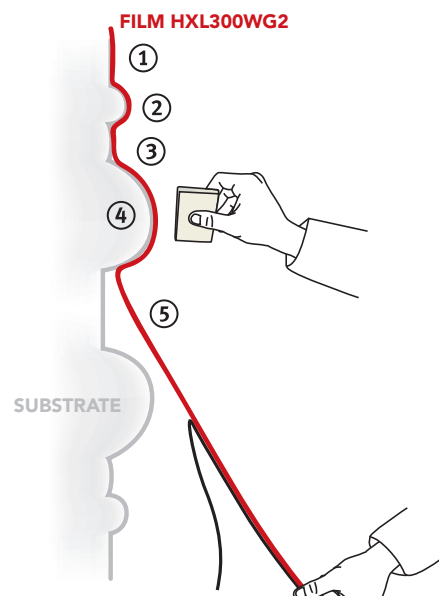
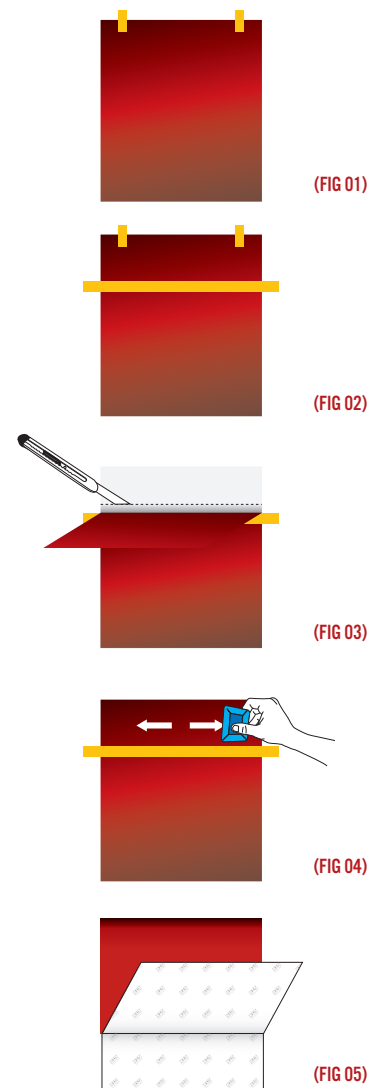
5.1 First steps and application of the HXL300WG2 onto flat surfaces

- › Always wear cotton gloves (available from HEXIS).
- › Position the printed film on the target surface so as to hold it in place without stretching it. (FIG 01)
- › With the help of strips of masking tape or magnets, make a horizontal hinge preferably on a flat area. (FIG 02)
- › Peel off 10cm (4in) of the liner (FIG 03) and start applying the vinyl using a squeegee (cover edge with felt strip) at an angle of 45° wiping from the centre towards the sides. (FIG 04)
- › Remove the top hinge and continue removing the liner, depending on the surface pattern (cf. paragraphs below). (FIG 05)
- › During application on flat surfaces, squeegee the entire surface and at the same time remove the liner steadily, tightly following any unevennesses.

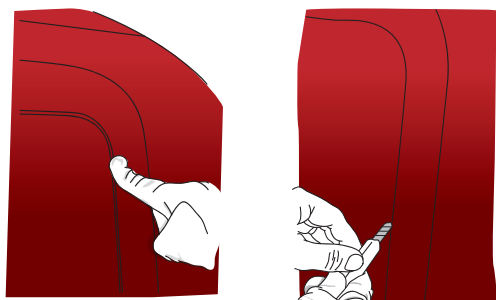
5.2 Slightly undulated surfaces

Having completed step 5.1, proceed as follows (FIG 06).

- › Remove the liner gradually by tensioning it towards the lower end.
- › Apply the film with the thumb or a squeegee horizontally progressing slowly into the hollow of the undulation.
- › Apply the hollow ① then the peak ②, then the hollow ③.
- › Go up onto the next peak ④ and so on.

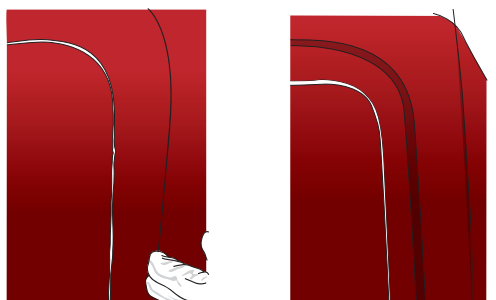


(FIG 06)



(FIG 07)

(FIG 08)



(FIG 09)

(FIG 10)

5.3 Slightly concave surfaces

After 5.1 proceed as follows:

- > Remove all the liner.
- > Stretch the vinyl over the substrate so that the film touches the peaks only.
- > Apply the film with a finger or a plastic squeegee covered with a felt sheet.
- > If necessary, lift off again and re-stretch the film; then apply.
- > Heat to between 40 and 50°C (104 and 122°F) and with a finger press down into the hollow area so as to apply the adhesive.

If any areas turn out to be too concave we recommend you make appropriate cuts in the following way:

- > Put on the glove and apply the outward curved areas (FIG 07).
- > Cut one side of the concave area (FIG 08) (be carefull not to scratch the substrate under the vinyl).
- > Heat the hollow area to between 40 and 50°C (104 and 122°F) and move your finger over the vinyl and press it down (FIG 09) (FIG 10).

5.4 Slightly convex surfaces

After 5.1 proceed as follows:

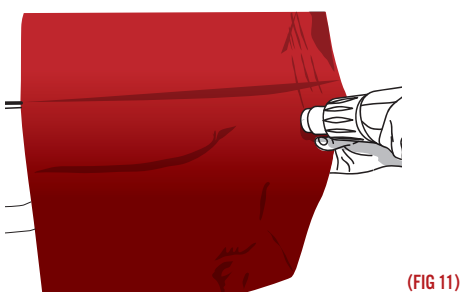
- > Remove the liner.
- > Heat the vinyl to between 40°C and 50°C (104°F and 122°F) then stretch the film so as to completely wrap the convex surface.
- > Apply the vinyl over the entire surface with the help of a plastic squeegee covered with a felt sheet and carefully wipe over the convex area to eliminate any tensions.
- > If necessary, lift the film, re-stretch it and completely wrap the convex surface.
- > Next heat to between 40°C and 50°C (104°F and 122°F), and squeegee down.
- > Leave to cool down.
- > Cut the film if necessary.
- > The application is completed.

If any areas turn out to be too convex we recommend you make appropriate cuts in the following way (for example the lower part of a car bumper):

- > Heat the vinyl to between 40°C and 50°C (104°F and 122°F) (FIG 11).
- > Stretch the vinyl over the flat surface area (FIG 12).
- > Cut narrow vertical stripes into the vinyl (FIG 13)
- > With a squeegee apply stripe after stripe with correct overlaps avoiding folds (FIG 14).
- > Leave to cool down and apply cuts.

5.5 Towards full vehicle wraps

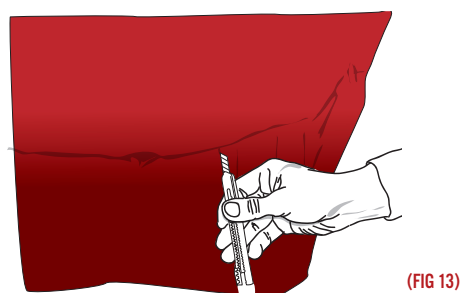
- > On vehicles the application of film on gaskets between windows and/or body panels must by all means be avoided.
- > Whenever a horizontal application becomes necessary as on engine hoods or roofs this may over time lead to a slight attenuation of colour and gloss compared to vertically exposed areas. As these areas suffer maximum exposure to sunlight and climatic influences



(FIG 11)



(FIG 12)



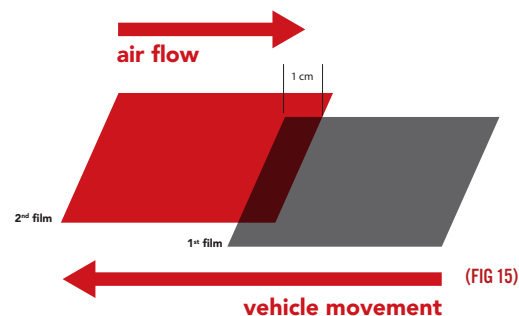
(FIG 13)



(FIG 14)

they are not covered by the manufacturers warranty regarding durability.

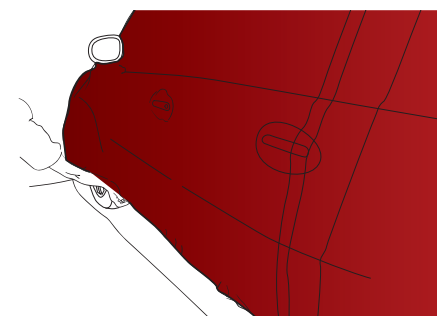
- › If an overlap becomes necessary, HEXIS recommends 1cm (0.4in) carried out in the following way:
 - › Horizontal overlap of the HXL300WG2: the upper part of the film (higher) overlaps the lower part (tiling).
 - › Vertical overlap of the HXL300WG2: on mobile surfaces: as the film is always applied starting at the rear of the vehicle working towards the front, the overlap is done in the same way (FIG 15).
- › In the case of a full vehicle wrap avoid applying the film on unpainted areas such as plastic profiles and unpainted bumpers.
- › The first steps are the most important and here is some essential advice:
 - › Make a horizontal hinge as indicated above (cf. 5.1) just above the door handles.
 - › Cut and remove the liner on the upper part.
 - › Tension the film and apply with the help of a squeegee.
 - › Once the upper part is applied, remove the remaining liner on the lower part.
 - › Tension the film over the door handles and with a squeegee apply the film along the contours of the door handles (FIG 16). Once the door handles are done, tension the film down to the bottom of the vehicle body. (FIG 17)
 - › Do not hesitate to lift the film off again and to stretch it again so as to remove any folds. If necessary heat to between 40°C and 50°C (104°F and 122°F).
 - › The film is now stretched over the total surface area to be wrapped. You can apply the film according to the type of surface.
 - › If any area is too convex or too concave make the appropriate cut. For very curved shapes (as on car bumpers) or hollow shapes (as under door handles) it is advisable to cut the vinyl in order to avoid excessive stretching of the vinyl.



(FIG 15)



(FIG 16)



(FIG 17)

6. EDGE SEALING TAPE OR EDGE SEALING VARNISH

HEXIS does not recommend the use of a sealing varnish in combination with the HXL300WG2 applied to vehicles (to avoid any risk of damage to the vehicle paint) but instead advises to use sealing strips cut from PL300CG2 laminate. However in certain cases such as HXL300WG2 applied to trains or heavy machinery, the sealing varnish VR7077 will be required to reinforce the edge of the film.

6.1 Edge sealing tape

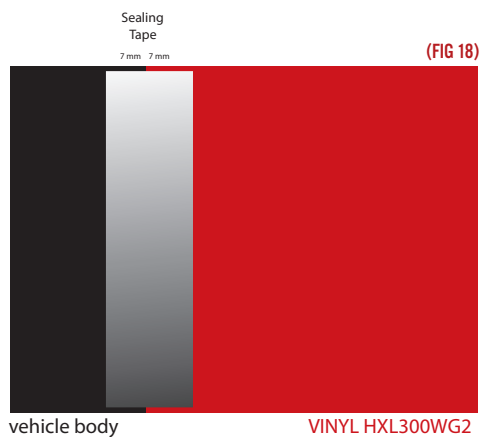
To increase the adhesion of the HXL300WG2 film on areas exposed to heavy wear such as door sills, wheel cages etc., you may use strips of PL300CG2 laminate.

- › Cut the laminate into strips 14mm (½in) wide.
- › Apply the strips with an overlap of approx. 7mm (¼ in) on the vehicle body and 7mm (¼in) over the HXL300WG2 film. (FIG 18)

6.2 Edge sealing varnish

To increase the adhesion of the edge of the HXL300WG2 on flat surfaces preferably and in particular at the corners HEXIS recommends the use of the VR7077 edge sealing varnish.

- › Ensure that all surfaces are completely dry.
- › Apply 2 strips of masking tape:
 - 1 on the substrate at 5mm (0.2in) from the edge of the HXL300WG2.
 - 1 on the HXL300WG2 at 5mm (0.2in) from the edge. (FIG 19)



- › Apply the varnish with a brush in one single coat; wear gloves and protective goggles.
- › Remove the masking tape 15 minutes after application.
- › The drying time is variable depending on the thickness of the varnish coat and the surrounding temperature: for a film with an average coat, the optimum drying time is 24 hours. Physical aggression (cleaning, abrasion, etc.) must be avoided by all means during that time.

⚠ Avoid contact between the varnish and the window seals.

7. CLEANING AND MAINTENANCE OF THE HXL300WG2

The HXL300WG2 may be cleaned in a conventional automatic car wash using cleaning products and detergents used for professional maintenance of vehicles and advertising equipment. Nevertheless exercise care: medium pressure at a distance of at least 50cm (20in) and a water temperature of 35°C (95°F) at the most.

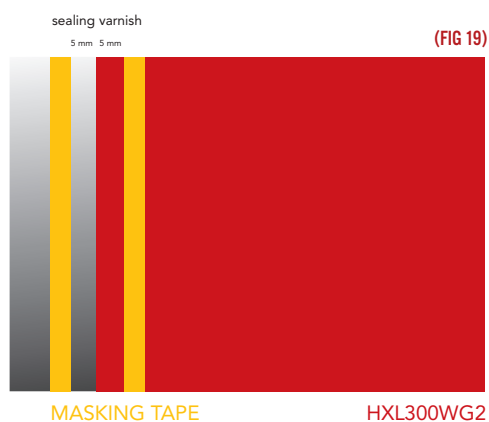
⚠ Attention: it is advisable not to clean the film during the 48 hours following the application to avoid the risk of affecting its adhesion which might result in the film lifting off.

⚠ Attention: do not use any solvents or corrosive detergents.

⚠ HEXIS declines all responsibility if any unknown additives are used during cleaning.

⚠ Car wash: additives and the condition of the rotating brushes may affect the behaviour of the graphics or the films. It is generally admitted that 10 automatic washes scratch polyurethane paints, and for this reason and in the same manner, this mechanical effect may damage the appearance of the vinyl but remains beyond the manufacturer's liability.

Our advice: always carry out a test on a small area before you clean the total surface of a vehicle wrap.



8. REMOVAL OF THE VINYL

The HXL300WG2 vinyl film carries a permanent adhesive; for this reason the removal needs some attention. Nevertheless, if you follow the instructions below, the removal will be relatively easy.

- › With the heat gun, starting in one corner heat the film at a temperature of around 60°C (140°F) (use the laser thermometer).
- › Peel the corner with the help of a cutter blade (available from HEXIS) avoiding contact with the substrate and then progressively heat the other areas and remove the film. The film should be peeled at an angle of 70° to 80° relative to the surface of the substrate.


 *An angle wider or narrower will make breaking up of the film more likely.*


› Always proceed gradually by heating small areas and carefully removing the film so as to avoid the risk of breaking up the film and of leaving any adhesive on the surface.

› Continue gentle heating and carefully peel the film until the complete surface area is removed exercising particular care as to the temperature, the peeling angle and the peeling speed.

› If any adhesive remains on the substrate, use a piece of cloth with DECOLL'VIT adhesive remover (available from HEXIS) and gently rub the surface until all adhesive traces have disappeared.

› To ease the removal of the VR7077 edge sealing varnish, acetone may be used.

 *Attention: do not let the liquids come into contact with rubber joints or seals.*

 *Before handling any liquids, refer to the users instructions on our website: www.hexis-graphics.com.*



For further information of a technical nature, refer to to Technical Data Sheets available for download from our website www.hexis-graphics.com under professionals/data sheets.

The great diversity of media and the ever growing number of possible applications commit the user to ensure that the product is suitable for each particular usage.

The information given does not constitute a warranty. The seller assumes no liability for claims or damages beyond the replacement value of a product. Specifications are subject to changes without notice. Updates to specifications can be found on our website www.hexis-graphics.com.



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