APPLICATION AND REMOVAL METHOD

PRODUCT BULLETIN

HEX'PRESS Cast Vinyl Film

CAST HX20000-HX30000

REQUIRED EQUIPMENT

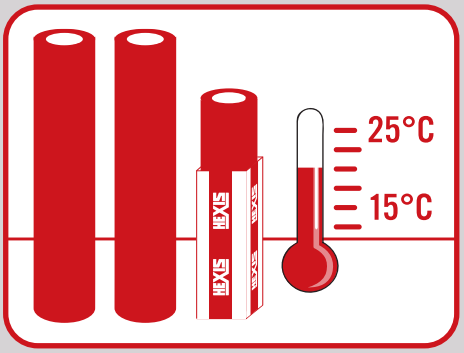
- Tesa® 50110 adhesive tape
- Masking tape
- Liquids for the cleaning of application surfaces:
  - SHAGREMOV
  - SHAGCLEANER
- ProTech® SHAMPCARV2 car body shampoo
- Liquid for an easier application: MAGICSPRAY
- Squeegees of your choice from the catalogue
- ROLLRIV application wheel for application over rivets
- RIVETBRUSH application accessory for riveted surfaces
- Edge sealing tape RSSEAL
- VR7077 sealing varnish
- PISTHERMIQ heat gun
- PISTLASER3 laser thermometer
- Different HEXIS application tools
- Cleaning agents

STORE YOUR FILMS UNDER APPROPRIATE CONDITIONS

Keep the films away from all major source of heat (radiators and heaters, direct exposure to sunlight, etc.): the best temperature ranges from 15 °C to 25 °C (from 59 °F to 77 °F).

Store them in an atmosphere with low humidity (with relative humidity between 30 % and 70 %).

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



FEATURES

The HX20000-HX30000 series is composed of a 70-µm to 280-µm (upon reference) multilayered, cast film and a HEX'PRESS technology liner. Due to its high technical performance and conformability, it may be used on curved or textured surfaces (weldings or rivets). This product is specially designed for vehicle wraps.
The conformability of the HX30CAF89S and HX30HC889S products is relative. These products are intended for use on flat and slightly complex surfaces. The combination of ultra-flexible cast vinyl and advanced HEX'PRESS technology allows you to obtain high quality results while reducing the time required for application. This technology allows for easy repositioning of the vinyl on the substrate during application.

PREPARING YOUR APPLICATION SURFACE

HEXIS 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. To avoid unexpected outcomes, always assume that every substrate is dirty and needs to be cleaned (cf. chapter 3).

Do not forget to carry out a preliminary trial on a small surface to check that the substrate remains undamaged.

For further information on the films used, please refer to the technical data sheets available on our website at www.hexis-graphics.com.

CONTENTS

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.

1. RECOMMENDATIONS:

› The colour of the films is controlled by HEXIS in order to ensure faithful reproduction of their colour tints. Nevertheless, in the case that your project requires the use of several rolls of the same colour reference, HEXIS recommend using only a single batch number of each reference.

› Avoid applying the adhesive-coated film to unpainted components such as trims or unpainted bumpers.

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

2. PRELIMINARY TEST OF THE APPLICATION SURFACES:

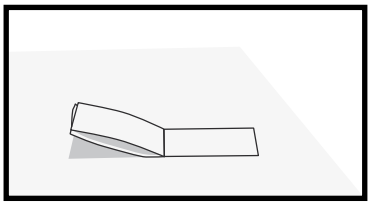
Before any application, the installer must first inspect the substrate and the paint to which the film will be applied.

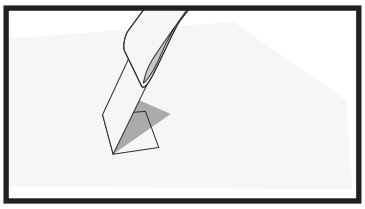
The installer and the customer are responsible for the suitability evaluation of the target surface to be covered.

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® 50110 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 tear it off with one quick pull perpendicular to the substrate surface. The film must generate a certain resistance during its removal. 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. HEXIS cannot be held liable for any damage to the substrate following the execution of this test.*

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 at ambient temperature or 2 hours at 65 °C (149 °F). The appearance of bubbles indicates that the substrate has not sufficiently degassed. In this case, 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 (YOU RISK DESTROYING THE SUBSTRATE IF A FIXED POINT IS HEATED FOR 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:

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 soiling 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.*

3.1. Clean or soiled surface appearance:

For vehicle wraps, it is advised to wash the vehicle with the SHAMPCARV2 vehicle body shampoo, then carry out a final cleaning using the SHAGCLEAN product.

SHAMPCARV2
Concentrated vehicle shampoo

3.2. Heavily soiled surface appearance:

For vehicle wraps, it is advised to wash the vehicle with the SHAMPCARV2 vehicle body shampoo, then use the SHAGREMOV product.

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

Prior to treatment, run a compatibility test on a small, inconspicuous area of the substrate to be treated. Certain plastic materials may be damaged by the SHAGREMOV.

SHAGREMOV
Powerful cleaning agent

› Spray the SHAGREMOV product on the dirty surface and spread it out using a dry cloth.

› Wait for a few minutes. Then spray the SHAGREMOV product again and wipe the surface dry with a clean cloth or squeegee.

› When the substrate is clean and dry, carry out a final cleaning with the SHAGCLEAN product.

SHAGCLEAN
Cleaning and degreasing finishing agent

3.3. Special case:

Remember to adapt the preparation methods to the substrate type and its condition. Thus, painted surfaces must be dry and hard, baked paints must be cooled down. Air-dried paints or car paints need to be dried for a minimum of one month before applying the film.

› For bare metallic surfaces in the case of a full wrap:

› Clean the substrate with soapy water and then with a cloth soaked with the SHAGCLEAN product.

⚠ *Refer to the Product Safety Data Sheet prior to use.*

› Thoroughly wipe down the surface after the cleaning process.

4. APPLYING THE GRAPHIC OR HX20000-HX30000 VINYL (excluding references HX30CAF89S; HX30HC889S):

It is mandatory to use the so-called “dry” application method with the HX20000-HX30000 film, due to its HEX’PRESS liner.

The HEX’PRESS technology allows for easy repositioning of the vinyl on the substrate during application.

However, HX20000-HX30000 films must be firmly squeegeed to achieve optimum adhesion on the substrate.

HEXIS tip: To enhance the surface sliding of the squeegee on the film while also limiting the risk of micro-folds during this phase, the MAGICSPRAY product can be sprayed on the squeegee surface as soon as necessary, until the film application is completed.

Before any application of the HX20000-HX30000 film, make sure that all surfaces are clean, paying particular attention to critical areas such as corners and edges.

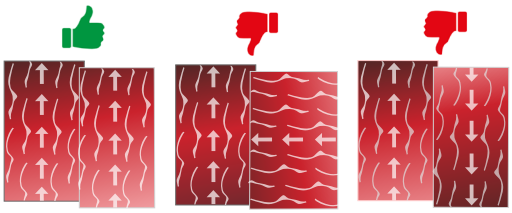


Figure 01

The ideal application temperature is between 15 °C and 25 °C (59 °F and 77 °F) (preferably between 20 °C and 25 °C (68 °C and 77 °C)) and should be observed for the ambient, the substrate and the film temperatures.

For the films of the HX30000 range, the minimum application temperature is 18 °C (64 °F). Avoid applications in colder environments. Due to their particular structure, these products tear off easily in cold working conditions.

The HX20000-HX30000 films should be oriented in the same direction during their application. This concerns in particular films with structured surfaces or with special optical effects, whose appearance or finish will be different if the film application direction is modified during the wrapping process (FIG. 01). For a uniform visual aspect, it is necessary to keep the same film application direction on each side of the vehicle during the wrapping process.

The matt colour and HX30CA000B films with carbon effect (except HX30CA890B, HX30CANCOB, HX30CANPEB) are prone to marks (in particular squeegee marks). For this reason, pay very special attention to the application of matt films, in particular complying with the appropriate inclination of the squeegee. If any traces remain after application, they can be reduced by slightly heating (max. 90 °C / 194 °F) the surface with a heat gun.

For the HX30CA890B, HX30CANCOB, HX30CANPEB films with carbon effect, the application process while wearing gloves will be easier if you slightly dampen your fingertips. For certain structured effects (alligator-skin, leather), the repetition of the pattern may create the impression of a grid pattern, particularly if the product is applied to large surfaces.

The degree of humidity may also influence the amount of time it takes until the definitive adhesion of the film to its substrate is achieved.

Caution: Any heating operation indicated below must be carried out with a heat gun in sweeping motions at a reasonable distance. The temperature must be checked with the laser thermometer on the film's surface, in the heated area, right after withdrawal of the heat gun's hot air flow.

After the full wrap of a heavy deformation, it is necessary to heat the deformation again to 80 °C - 90 °C (176 °F -194 °F) in order to ensure the good adhesion of the vinyl over time. In the case of HX30000 films with structured effects (carbon, alligator, leather, etc.), this re-heating step must be carried out very carefully (medium setting on the heat gun, heat gun constantly moving, increase the distance between the heat gun and the film). Heating phases that are too long or too focused may lead to the film tearing off.

⚠ *If the heat flow is maintained on a fixed spot or near the surface of the film, it may result in an irreversible deterioration of the product. The temperature measurement must be carried out outside of the heat gun's hot air flow as this would give a wrong measurement and could lead to an insufficient reheating temperature (risk of the film peeling off later).*

4.1. First steps and application of HX20000-HX30000 film to flat surfaces:

› Wear gloves (GANTSCOV).

Figure 02

› Position the printed film on the target surface and tape it into place without stretching it. (FIG. 02)

Figure 03

› Apply a strip of masking tape or magnets across the upper section of the graphic in order to create a horizontal hinge, preferably on a flat part of the surface. (FIG. 03)

› Peel off 10 cm (4 in.) of the liner. (FIG. 04)

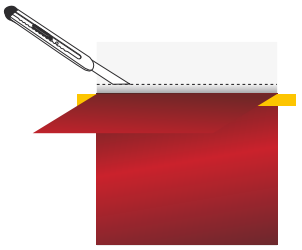


Figure 04

› Start applying the film with a squeegee (previously covered with felt), by forming a 45° angle with the substrate and working from the centre towards the edges. (FIG. 05)

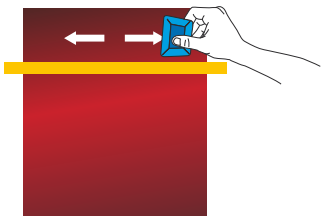


Figure 05

HEXIS tip: To enhance the surface sliding of the squeegee on the film, the MAGICSPRAY product can be sprayed on the film's surface as soon as necessary, until the film application is completed.

› Remove the top hinge and continue removing the liner, depending on the surface structure (cf. paragraphs below). (FIG. 06)

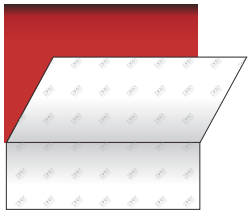


Figure 06

› During application to flat surfaces, squeegee the entire surface while removing the liner steadily, firmly pressing on the edges and corners.

4.2. Undulated surfaces: Heavy undulations: "extended application"

After having completed step 4.1., you may come across slight or heavy undulations for which the application process will be different.

› Gradually remove the liner while pulling it downward (FIG. 07)

› Apply the film horizontally with your thumb or a squeegee by progressing slowly into the hollow of the undulation.

› Start by applying the hollow ①, then the peak ② and finally the hollow ③.

› Continue onto the next undulation ④, then keep going ⑤ until completion of the application.

› As the film was not stretched, it is not necessary to heat again to 80 °C (176 °F).

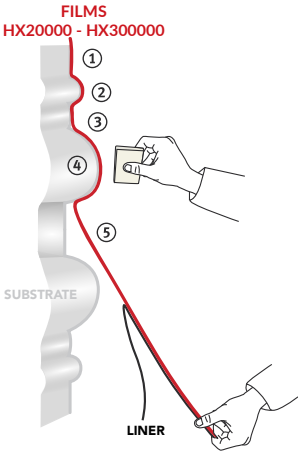


Figure 07

⚠ *In the hollow parts, the HEX'PRESS adhesive technology requires sufficient pressure in order to completely expel any air that could remain in the micro-channels. This is because the air that has not been evacuated and that is not visible to the eye may later result in the film peeling off from its substrate.*

HEXIS tip: To enhance the surface sliding of the squeegee on the film, it is highly recommended to spray the application liquid MAGICSPRAY on the film's surface as soon as necessary, until the film application is completed.

4.3. Concave surfaces:

Any heating operation indicated below must be carried out with the heat gun in sweeping motions at a reasonable distance. The temperature must be checked with the laser thermometer on the film's surface, in the heated area, right after withdrawal of the heat gun's hot air flow.

⚠ *If the heat flow is maintained on a fixed spot or near the surface of the film, it may result in an irreversible deterioration of the product. Do not measure the temperature in the air flow of the heat gun. This would give a wrong measurement and could lead to an insufficient reheating temperature (risk of the film peeling off later).*

When step 4.1. is finished, proceed as follows:

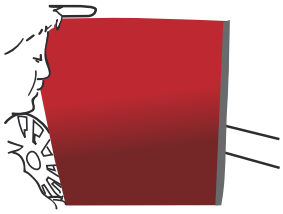


Figure 08

Remove the whole liner. (FIG. 08)

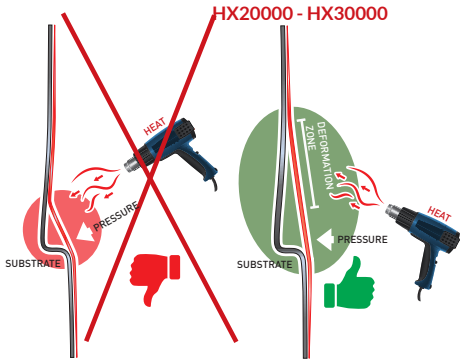


Figure 09

› Stretch the vinyl on the substrate so that the film touches the raised parts only. (FIG. 09)

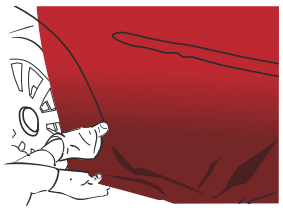


Figure 10

› Apply the peak with your finger or a felt-covered plastic squeegee. (FIG. 10)

› If necessary, lift the film, stretch it again and apply it.

Figure 11

› Heat to a temperature ranging from 40 °C to 50 °C (from 104 °F to 122 °F) and lower your thumb in the hollow part so as to properly apply the adhesive. (FIG. 11)

⚠ *HEXIS recommend you to pay particular attention to the application of HEX'PRESS films to concave areas. The HEX'PRESS technology requires sufficient pressure to be applied at the film's surface in order to completely expel any air that could remain in the micro-channels. The air that has not been evacuated and that is not visible to the human eye may later result in the film peeling off from its substrate.*

HEXIS tip: In order to reduce the risk of micro-folds generating during the air evacuation phase, it can be necessary to increase the surface sliding of the squeegee on the film. For this purpose, MAGICSPRAY can be sprayed on the squeegee surface whenever needed, until the film application is completed.

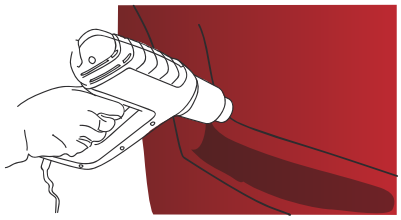


Figure 12

› Once this step is completed, heat again all the hollow parts which have undergone heavy deformation between 80 °C and 90 °C (176 °F and 194 °F) to thermoform the product definitively. (FIG. 12)

4.4. Convex surfaces:

When step 4.1 is finished, proceed as follows:

› Remove the liner.

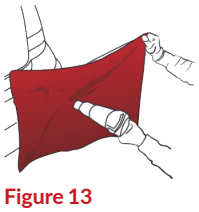


Figure 13

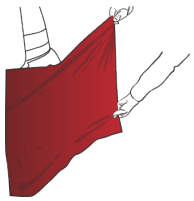


Figure 14

› Heat the film to a temperature ranging from 40 °C to 50 °C (from 104 °F to 122 °F) (FIG. 13) (30 °C to 40 °C (86 °F to 104 °F) for HX30CA890B, HX30CANCOB, HX30CANPEB), then stretch the film so as to completely wrap the convex surface. (FIG. 14)

› Apply the film over the whole surface using a felt-covered, plastic squeegee, and carefully wipe over the convex area (FIG. 15) to eliminate any tensions and folds.

If necessary, lift the film, stretch it again, completely wrap the convex surface and apply it. (FIG. 16)

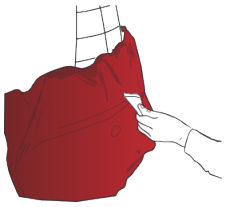


Figure 15

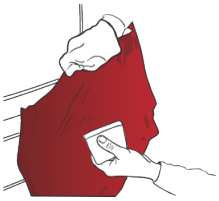


Figure 16

› After this operation, heat to a temperature ranging from 40 °C to 50 °C (from 104 °F to 122 °F) (FIG. 17) (30 °C to 40 °C (86 °F to 104 °F) HX30CA890B, HX30CANCOB, HX30CANPEB, HX30CAF89S and HX30HC889S) and stretch to eliminate all folds using the squeegee.

› Cut, if necessary, and heat all the edges again to a temperature ranging from 80 °C to 90 °C (from 176 °F to 194 °F).

› The application is complete. (FIG. 18)

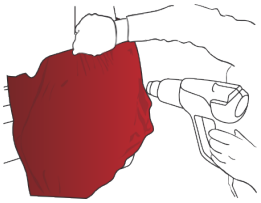


Figure 17

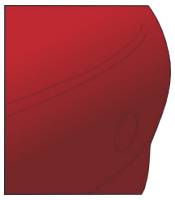


Figure 18

⚠ *In the case of HX30000, take particular care when heating the stretched film (FIG. 13) to (FIG. 18). The heat gun's position must not be perpendicular to the film's surface. Incline the heat gun so as to heat a larger area. Keep the heat gun constantly moving. Never heat a reduced surface area over a prolonged period of time.*

4.5. Riveted surfaces:

When step 4.1 is finished, proceed as follows:

› When you encounter a rivet, stretch the film. Gently heat to a temperature ranging from 40 °C to 50 °C (from 104 °F to 122 °F) (from 30 °C to 40 °C (from 86 °F to 104 °F) for HX30CA890B, HX30CANCOB, HX30CANPEB). Then dab the rivets with the RIVETBRUSH to apply the film.

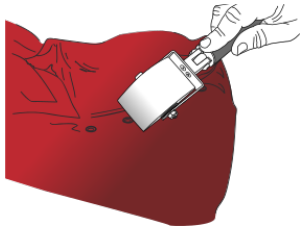


Figure 19

› Then slide the ROLLRIV (FIG. 19) over the film to adhere it to the entire rivet surface. Press it around the entire rivet using a squeegee or your thumb.

› To finish, use the RIVETBRUSH and firmly apply it to the rivets (still by dabbing).

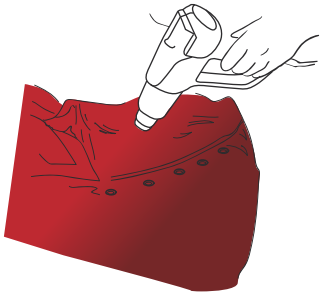


Figure 20

› Then heat each rivet again to 80 °C - 90 °C (176 °F - 194 °F). (FIG. 20)

4.6. Overlaps:

If two film parts need to overlap, it is important to comply with the following instructions in order to achieve optimum adhesion of one film on the other:

› Clean the lower film using a microfiber cloth soaked with the SHAGCLEAN product. Leave to dry.

⚠ *If the upper film needs to be repositioned, separate the lower film with extreme care.*

› Apply the upper film. Press down strongly on the overlapped area using your gloved hand or a squeegee while heating the area at around 50 °C (122 °F).

› Avoid applying the HX20000-HX30000 film to unpainted components such as trims or unpainted bumpers.

5. APPLYING THE GRAPHIC OR VINYL: SPECIAL FEATURES OF THE REFERENCES HX30CAF89S; HX30HC889S:

The conformabilities of HX30CAF89S and HX30HC889S are relative. These products can be used on flat and slightly complex surfaces. It is important to keep the deformation of the film below 10 %. The heating must be carried out with care, on large surfaces (never concentrate the airflow on a small surface, this would cause an alteration in the film's gloss).

5.1. First steps and application of the "specific HX30000 films" to flat surfaces:

Refer to chart 4.1. on page 4.

5.2. Slightly undulated surfaces:

When step 5.1. is finished, proceed then as described in chart 4.2.2 on page 5.

5.3. Slightly concave surfaces:

When step 5.1. is finished, proceed as follows:

› Remove the whole liner.

› Stretch the vinyl over the substrate so that it touches the peaks only.

› Apply the peak with your finger or a felt-covered plastic squeegee.

› Heat to a temperature ranging from 40 °C to 50 °C (from 104 °F to 122 °F) and lower your thumb in the hollow part so as to properly apply the adhesive.

› Once this step is completed, heat again all the slightly hollow parts that have undergone heavy deformation between 80 °C and 90 °C (176 °F and 194 °F) to thermoform the product definitively.

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

Figure 21

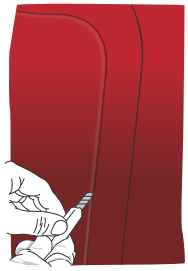


Figure 22

› Put on a glove and apply the slightly raised parts. (FIG. 21)

› Make a cut with the cutter on one of the sides of the concave area. (FIG. 22) (Be careful not to scratch the substrate under the vinyl.)

› Heat the uncut hollow area to a temperature ranging from 40 °C to 50 °C (from 104 °F to 122 °F) and use your finger to go into the hollow and press down the adhesive. (FIG. 23)

TIP! In order to hide the substrate at your cut (FIG. 24), you can apply a strip of your vinyl on the concave part of the substrate where you will make the cut. Thus, when you apply the film and make the cut, the overlap of the vinyl will conceal the substrate. Cut and remove the surplus material right after application.

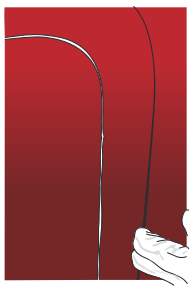


Figure 23

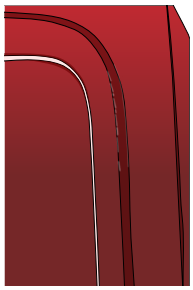


Figure 24

5.4. Slightly convex surfaces:

When step 5.1. is finished, proceed as follows:

› Remove the liner.

› Heat the vinyl to a temperature ranging from 40 °C to 50 °C (104 °F to 122 °F), then stretch the film so as to wrap the slightly convex surface.

› Apply the vinyl over the whole surface using a felt-covered, plastic squeegee, and carefully wipe over the convex area to smooth the film and eliminate any tensions and folds.

› If necessary, lift the film, stretch it again and apply it.

› After this operation, heat and stretch to eliminate all folds using the squeegee.

› Cut, if necessary, and heat again all the edges to a temperature ranging from 80 °C to 90 °C (from 176 °F to 194 °F).

If any areas turn out to be too convex, we recommend you to make the appropriate cuts in the following manner:

Example on the bottom part of a front or rear bumper of a vehicle.

› Heat the vinyl to a temperature ranging from 40 °C to 50 °C (from 104 °F to 122 °F). (FIG. 25)

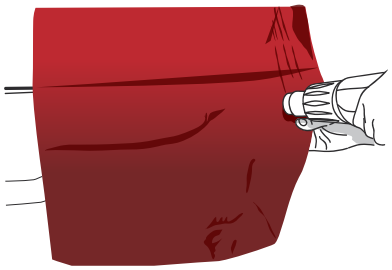


Figure 25

› Stretch the vinyl over the flat part. (FIG. 26)

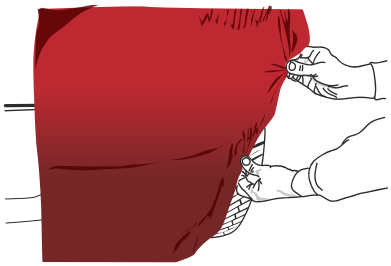


Figure 26

› Using the cutter, cut vertical strips in the vinyl. (FIG. 27)

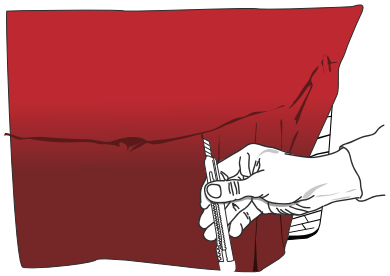


Figure 27

Figure 28

› Apply one strip after the other using the squeegee taking care to overlap the vinyl correctly and without creases. (FIG. 28)

› Once the convex part is applied, leave it to cool down and then carry out the cuts.

6. ADDITIONAL INFORMATION FOR A FULL VEHICLE WRAP:

› For vehicles, the application of film to window and body panel seals must be avoided by all means.

› Whenever application to a horizontal surface is necessary, such as on engine hoods or roofs, a slight fading of colour and gloss may develop over time compared to vertically oriented areas. As these areas suffer maximum exposure to sunlight and climatic influences, they are not covered by the HEXIS warranty regarding durability.

› If a seam is necessary between two widths, HEXIS recommend you overlap the film by 1 cm (0.4 in.), as follows:

• Horizontal overlapping of the HX20000-HX30000 film: the upper film (above) is applied to the lower one (below). (Tiling principle).

• Vertical overlapping of the HX20000-HX3000 film on a mobile surface: assuming you always apply the film starting from the rear of the vehicle and moving to the front, then the overlapping will be done in the same way. (FIG. 29)

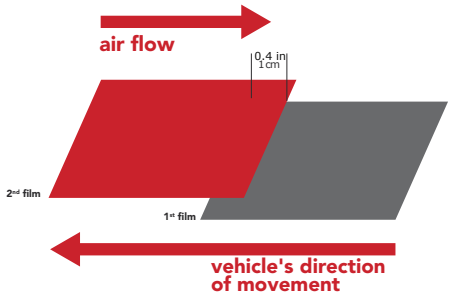


Figure 29

⚠ *If the upper film needs to be repositioned, separate it from the lower film with extreme care.*

› Avoid applying the HX20000-HX30000 film to unpainted components such as trims or unpainted bumpers.

› The first step is very important and here are some essential tips:

› Make the hinge as indicated above (cf. “First steps and application of HX20000-HX30000 film to flat surfaces”, page 4) just above the door handles.

› Cut and remove the liner from the upper part.

› Stretch the film and apply it using a squeegee.

› Once the upper part is applied, remove the remaining liner from the lower part.

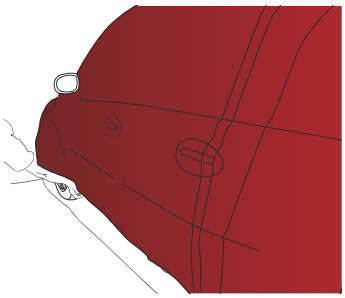


Figure 30

› Stretch the film over the door handles and, using a squeegee, apply the film all around the door handles. Once the door handles are done, stretch the film down to the bottom of the vehicle body. (FIG. 30)

› Do not hesitate to lift and stretch the film again in order to remove any folds. If necessary, heat to a temperature ranging from 40 °C to 50 °C (104 °F to 122 °F) (from 30 °C to 40 °C (from 86 °F to 104 °F) for HX30CA890B, HX30CANCOB, HX30CANPEB, HX30CAF89S and HX30HC889S).

› The film is stretched over the entire surface area to be wrapped. Now you can apply the film (FIG. 31) according to the type of surface.

Figure 31

7. CUTS AND FINISHINGS:

For whichever part to be wrapped, leave an overlap of vinyl with a minimum of 5 cm (1.97 in.).
If there is a part adjacent to the part to be wrapped, apply a minimum of 5 cm (1.97 in.) of the vinyl on the adjacent part.

Then proceed with the cutting and finishing, depending on the different cases:
The cutter blade must never be perpendicular to the vehicle body in order to avoid scratching the paint.

7.1. Slanting cut:

This cutting method should be applied if the wrapped part features a thin edge and the adjacent part, by contrast, a straight and wide one. (FIG. 32)

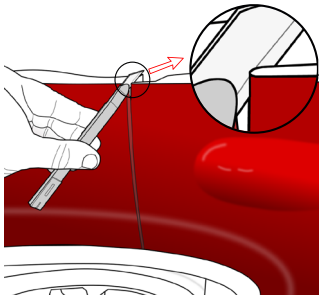


Figure 32

This concerns in particular car doors and hoods, etc.

› Wear gloves (GANTSCOV).

› Use a cutter with a new blade.

› Trace the contours of the area with your (gloved) finger. (FIG. 33)

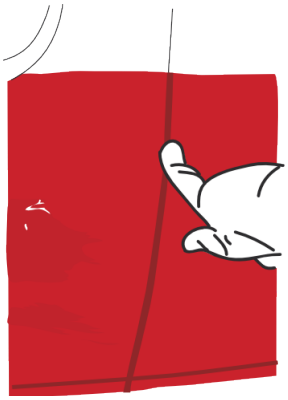


Figure 33

› For the cut, the cutter blade must be placed against the thin edge of the part to be wrapped. When cutting, make sure you always go along the same line, with the cutter blade inclined towards the outside. (FIG. 34)

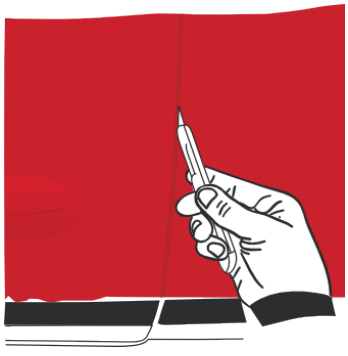


Figure 34

Figure 35

› To finish, run the squeegee over the cut. Incline the squeegee towards the thinner edge. (FIG. 35)

7.2. Straight cut with overlap:

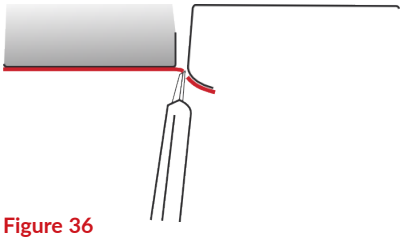


Figure 36

This method is to be used when the part to be wrapped and the adjacent part feature straight edges (FIG. 36). This concerns in particular the contours of head and tail lights, etc.

› Wear gloves (GANTSCOV).

› Use a cutter with a new blade.

› Trace the contours of the area with your (gloved) finger.

Figure 37

› For the cut, the cutter blade must be placed against the edge of the adjacent part. When cutting, make sure you always go along the same line. (FIG. 37)

Figure 38

› To finish, run the squeegee over the cut. (FIG. 38)

7.3. Straight cut without overlap:

This method is used for a cut along a seal.

› Use a cutter with a new blade.

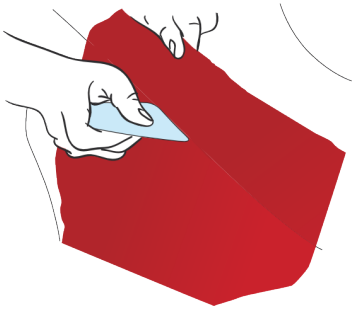


Figure 39

› Trace the contours of the area with your finger. Lift the vinyl of the adjacent part and drag it into the hollow using a squeegee so as to mark the seal edge. (FIG. 39)

› For the cut, the blade must be placed in a flat position, between the body and the seal, perpendicular to the seal. When cutting, make sure you always maintain this blade inclination. (FIG. 40)

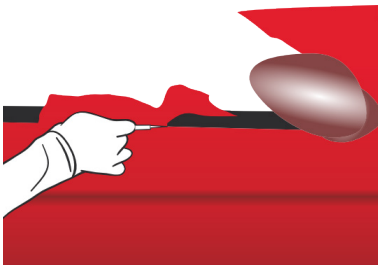


Figure 40

› Remove any excess film.

› To finish, run the squeegee over the cut.

8. USE OF THE HEAT GUN:

You have used the heat gun for dry application to complex surfaces (concave, convex, riveted).

Once the application is finished, heat once more all the parts that have undergone severe deformation using the heat gun (FIG. 41). The heating temperature ranges from 80 °C to 90 °C (from 176 °F to 194 °F). Check it using the PISTLASER3 laser thermometer.

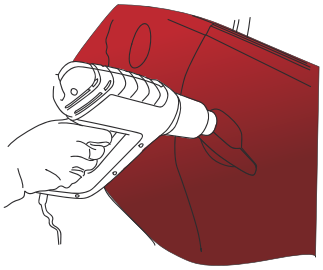


Figure 41

Heat accelerates the bonding process of the pressure-sensitive adhesive. In this way, the vinyl will be definitively thermoformed.

⚠ *In the case of HX30000 films with structured effects (carbon, alligator, leather, etc.), this re-heating step must be carried out very carefully (medium setting on the heat gun, heat gun constantly moving, increase the distance between the heat gun and the film). Heating phases that are too long or too focused may lead to the film tearing off.*

9. FINISHING:

At the end of the application, leave the vehicle (or the wrapped component) in an environment with a temperature ranging from 15 °C to 25 °C (from 59 °F to 77 °F) and a relative humidity between 30 % and 70 % for at least 12 hours.

Finally check all areas where the film was cut. If the film peels off or wrinkles, apply strong pressure to the edges again using the squeegee.

10. EDGE SEALING TAPE OR VARNISH:

HEXIS recommend using RSSEAL sealing strips rather than sealing varnish when applying HX20000-HX30000 film to a vehicle (to avoid any risk of damaging the vehicle paint during removal).
However, in certain cases, such as the application of HX20000-HX30000 film to trains or heavy machinery, the VR7077 sealing varnish will be required to reinforce the film edges.

10.1. Edge sealing tape:

To enhance the adhesion of HX20000 - HX30000 films to areas exposed to heavy wear such as door sills, wheel cages, etc., you can use RSSEAL strips for slightly curved surfaces.

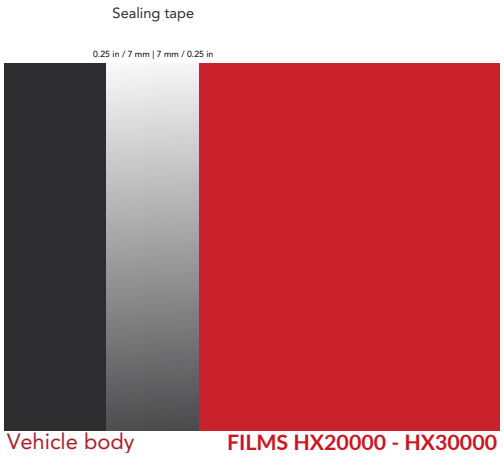


Figure 42

› Apply the strip by overlapping it by approximately 7 mm (¼ in.) over the body work and 7 mm (¼ in.) over the HX20000 - HX30000 film. (FIG. 42)

HEXIS tip: it is preferable to use sealing strips rather than the VR7077 sealing varnish for most applications.

10.2. Edge sealing varnish:

The VR7077 sealing varnish must be applied only to reinforce the seal and adhesion of the edges of the HX20000 - HX30000 films undergoing heavy external stress without modifying the adhesion properties of the films.

HEXIS tip: it is preferable to use sealing strips rather than the VR7077 sealing varnish for most applications.

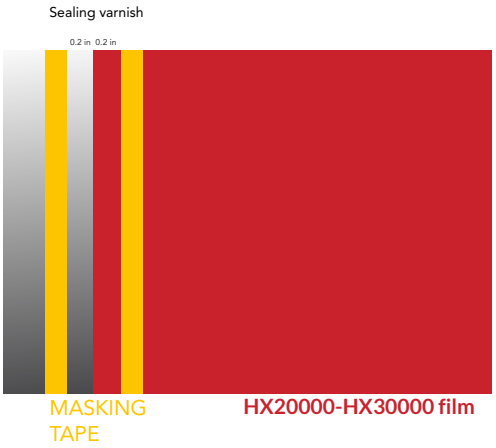


Figure 43

Using VR7077 varnish is at the installer's own discretion.

› Ensure that all surfaces are completely dry.

› Apply 2 strips of masking tape:

- 1 to the substrate at 5 mm (0.2 in.) from the HX20000-HX30000 film.
- 1 to the HX20000-HX30000 film at 5 mm (0.2 in.) from its edge. (FIG. 43)

› Apply the varnish with a brush in one single layer; wear gloves and protective goggles.

› Remove the masking tape 15 minutes after application.

› Drying time is variable depending on the thickness of the varnish coat and surrounding temperature: For a film with an average coat, optimal drying time is 24 hours. Any physical aggression (cleaning, abrasion, etc.) must be avoided by all means during that period of time.

⚠ *In all cases, avoid any contact between varnish and window seals.*

11. CLEANING AND MAINTENANCE OF THE HX20000-HX30000 FILM:

For a complementary cleaning of the HX20000 - HX30000 films, use the SHAGRELOAD product with a clean microfibre cloth.

› Spray directly onto the surface to be cleaned (± 40 cm x 40 cm / 15 in. x 15 in.).

› Wipe with a microfibre cloth before the product dries.

The cast HX20000-HX30000 film can be cleaned in any conventional automatic car wash, using cleaning products and detergents used for professional maintenance of vehicles and advertising equipment.

Nevertheless, exercise care when cleaning with high-pressure cleaners: Apply medium water pressure at a minimum distance of 50 cm (20 in.) and a maximum water temperature of 35 °C (95 °F).

To maintain a perfect finish over time, the HX30CA890B film with carbon effect may require more frequent cleaning than the other films of this range.

⚠ *Do not wash the film within the first 48 hours following its application as this can affect the adhesion, which may result in the film peeling off.*

⚠ *Solvents and corrosive detergents must not be used.*

⚠ *HEXIS are not liable for any adhesive films cleaned with unspecified additives from cleaning stations.*

⚠ *Car washes: The additive products and the condition of the rotating brushes may impair the adhesion of the graphics or films. It is commonly admitted that after 10 car washes, the polyurethane paint becomes streaked; we are not accountable for these mechanical effects that may affect the vinyl appearance.*

HEXIS tip: Always carry out a test on a small area before cleaning the entire covered surface.

12. REMOVAL PROCEDURE:

The HX20000-HX30000 films feature a permanent adhesive and therefore their removal could be difficult. Nevertheless, by following the instructions below, the removal will be relatively easy.

› Using a heat gun, start from a corner and heat the film to a temperature of around 60 °C (140 °F) (use the 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 gently peel off the film 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 SHAGREMOV product and rub the surface until all traces disappear.

› Acetone may be used to ease the removal of the VR7077 sealing varnish.

⚠ *Liquids may damage seals; therefore, take the necessary precautions before performing the clean-up.*

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

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