

PRODUCT BULLETIN

APPLICATION GUIDE Protection film: **CANDYFENCE CF001**

REQUIRED EQUIPMENT

- › TESA® 50110 adhesive tape
- › Microfibre cloths MFKIT
- › ProTech® SHAMPCARV2 car shampoo
- › Liquids for the cleaning of application surfaces:
 - › SHAGREMOV
 - › SHAGCLEAN
- › SHAGGUN heat gun
- › PISTLASER3 laser thermometer
- › Liquid for an easier application: MAGICSPRAY
- › Squeegee LIBERTE or MARBLEUF with felt cover
- › Gloves for full wraps SHAGGLOVE
- › CUTOLFA30 30° blade cutter
- › LAMOLFA30 refill
- › BODYRELOAD cleaning agents
- › Ceramic coating kit NANOSERUM by HEXIS

FEATURES

CANDYFENCE CF001 is a coloured, textured film developed to protect automotive paintwork. Its excellent shock-absorbing properties help protect against stone chips, insects, door impacts, car-wash brushes, etc. It also provides effective protection against vandalism.

PREPARING YOUR APPLICATION SURFACE

CANDYFENCE CF001 can be applied to any vehicle body provided the substrate is clean, smooth, non-porous, and free from oil, grease, wax, silicone or other contaminants. Always assume substrates are dirty and must be cleaned.

Perform a preliminary trial on a small surface to check if the substrate remains undamaged.

For further technical information on the CANDYFENCE CF001 film, please refer to the technical data sheet available on our website at www.hexis-graphics.com.

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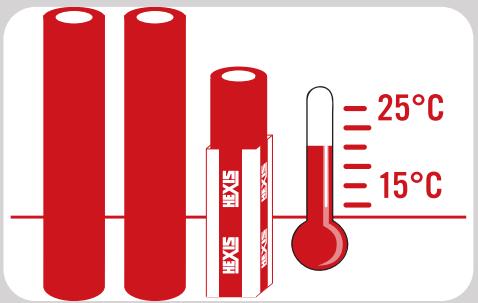
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STORE YOUR FILMS UNDER APPROPRIATE CONDITIONS

Keep the films away from any major source of heat (radiators and heaters, direct exposure to sunlight, etc.): the best temperature ranges from 15 °C to 25 °C (59 °F to 77 °F) with relative humidity of 50 %.

Store your films in their original packaging, in a dry environment. The rolls are wrapped in sealed polyethylene bags and are maintained in their cardboard packaging by plastic suspension caps to prevent the windings from being crushed by their own weight.

Always store the rolls in an upright position.



Application methods are based upon HEXIS' experience and are non-restrictive. Comply with instructions to ease application of HEXIS films. The illustrations in this document are representative and not binding; the accessories and products used may differ depending on technical and commercial developments. HEXIS also offer training sessions for beginners and professionals to achieve optimum results.

1. RECOMMENDATIONS:

- › Optimal adhesion of the CANDYFENCE CF001 film is obtained after 24 hours following application.
- › After cutting the necessary film length for the wrapping project, the remaining film must be stored on its original core (do not cut the rolls into several lengths, do not repackage the product); the roll must be properly closed immediately after use (tape or roll-collars), without exerting pressure on the film, in order to preserve all its qualities.

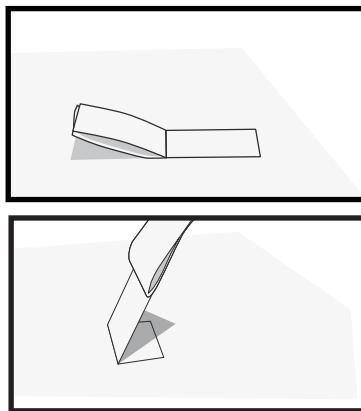
2. PRELIMINARY TEST OF THE APPLICATION SURFACES:

Before proceeding with 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 new paint must have dried for at least 7 days at 25 °C (77 °F) r 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 promptly tear it off perpendicularly 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:

Use a square piece 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 insufficiently 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 SWIPIING MOTIONS ON THE SUBSTRATE (RISK OF DESTROYING THE SUBSTRATE IF A FIXED POINT IS HEATED MORE THAN A SECOND).

The film must be applied immediately after that 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 at www.hexis-graphics.com.

3.1. Clean and 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.

! Handle the SHAGREMOV product in a ventilated area. Wear protective goggles and gloves.

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

- › Spray the SHAGREMOV product on the dirty surface and spread it evenly 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 using the SHAGCLEAN products.

SHAGREMOV
Powerful cleaning agent



SHAGCLEAN
Cleaning and degreasing finishing agent



4. APPLICATION OF THE CANDYFENCE CF001 FILM:

It is mandatory to use the prescribed "dry" application method with the CANDYFENCE CF001 film, due to its liner.

The embossing technology of the liner allows easy repositioning of the film on the substrate.

However, CANDYFENCE CF001 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 CANDYFENCE CF001 film, make sure that all surfaces are clean, paying particular attention to critical areas such as corners and edges.

The minimum recommended application temperature is +10 °C (50 °F).

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

The CANDYFENCE CF001 film should be oriented in the same direction on each side of the vehicle during their application (FIG. 01), particularly during a full wrapping process in order to obtain a uniform visual aspect.

Measure the areas to be wrapped. Cut the CANDYFENCE CF001 film while keeping a margin of at least 10 cm (4 in) so as to be able to hold it taut during application.

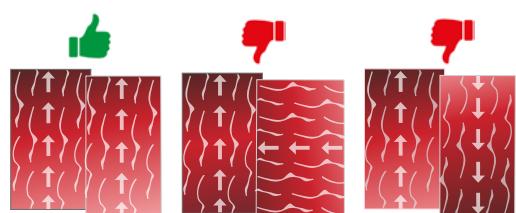


Figure 01

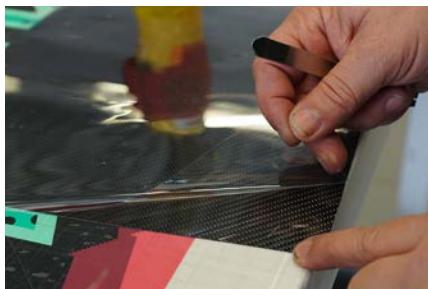


Figure 02

CANDYFENCE CF001 features a transparent surface protection film on the surface to protect it from dust, marks caused by handling, etc. during storage and after opening, but also to provide it with more rigidity. (FIG. 02)

This transparent protective film must be removed just before starting to apply the film to the bodywork.

Carefully separate the adhesive-coated protection liner from the CANDYFENCE CF001 film.

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, immediately 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. The temperature measurement must be carried out outside of the heat gun's hot air flow as this would give a wrong measurement*

4.1. First steps and application of CANDYFENCE CF001 film to flat surfaces:

- › Wear gloves (SHAGGLOVE).



Figure 03

- › Position the printed film on the target surface and tape it into place without stretching it. (FIG. 03)

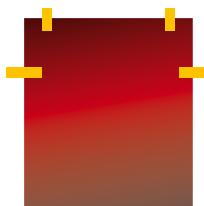


Figure 04

- › 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. 04)

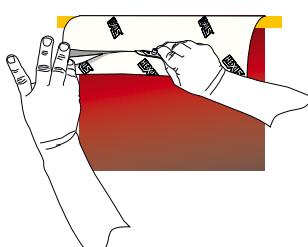


Figure 05

- › Make a slit with the SHAGCUT in the liner, at a distance of about 10 cm (4 in.) from the edge, then remove the upper part. (FIG. 05)

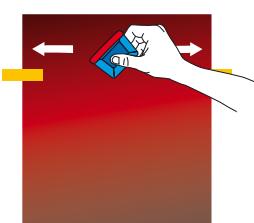


Figure 06

- › 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. 06)

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. 07)

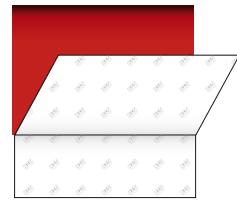


Figure 07

› 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., there may be slight or heavy undulations for which the application process will be different.

› Gradually remove the liner while pulling it downward. (FIG. 08)

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

› Start by applying the film to the hollow part ①, then to the peak ② and finally to the hollow part 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).

FILM CANDYFENCE CF001

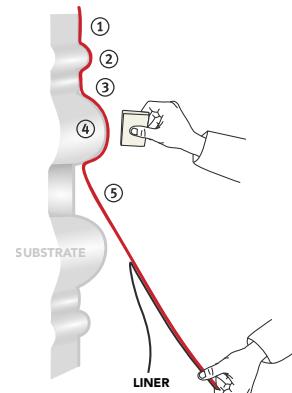


Figure 08

! *In the hollow parts, the HEXPRESS ONE adhesive technology requires sufficient pressure in order to completely expel any air that could remain in the micro-channels. This is because unevacuated air is invisible to the naked eye that may result in the film peeling from the substrate.*

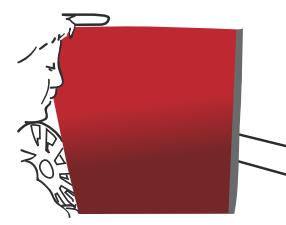
HEXIS tip: To enhance the surface sliding of the squeegee on the film, it is highly recommended to spray the application liquid MAGICSPRAY on the film's surface as soon as necessary, until the film application is completed.

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, immediately 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.*

After having completed step 4.1, proceed as follows:



Remove the whole liner. (FIG. 09)

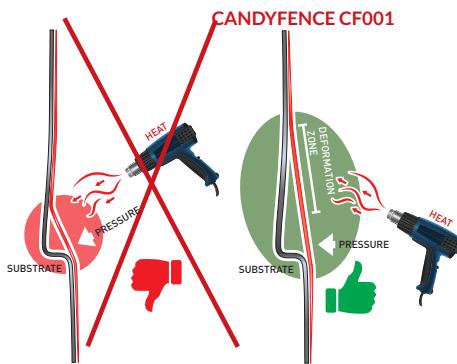


Figure 10

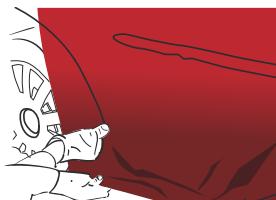


Figure 11

- › Stretch the film over the substrate so that it touches the peaks only. (FIG. 10)

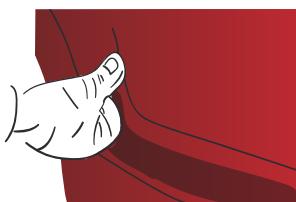


Figure 12

- › Apply the peak with your finger or a felt-covered plastic squeegee. (FIG. 11)

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

- › 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. 12)

! HEXIS recommend that particular attention is paid to the application of HEXPRESS 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. This is because unevacuated air is invisible to the naked eye that may result in the film peeling from the 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.

4.4. Convex surfaces:

After having completed step 4.1., proceed as follows.

- › Remove the liner after having removed the surface protection film.

- › Position the film on the surface to be wrapped. (FIG. 13)



Figure 13

- › Apply one corner of the film to the substrate using a squeegee.

- › Stretch the film lengthwise over the part to be covered so as to completely wrap the highly convex surface in order to remove the folds. (FIG. 14)



Figure 14

- › Heat the film to a temperature ranging from 40 °C to 50 °C (from 104 °F to 122 °F) to soften it. (FIG. 15)



Figure 15

- › Stretch the film to completely wrap the surface without leaving any folds on the outside. (FIG. 16)



Figure 16

- › Spread out and eliminate any folds by gently lifting the film and slightly pulling it towards the edges of the film. (FIG. 17)

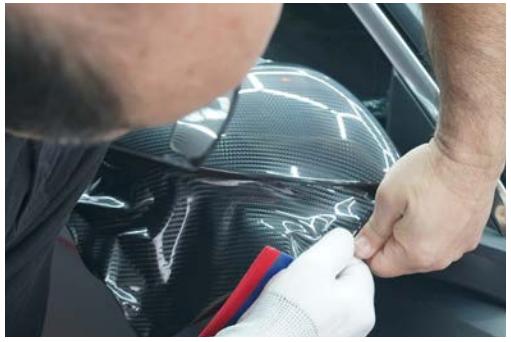


Figure 17

- › Heat the film to a temperature ranging from 40 °C to 50 °C (from 104 °F to 122 °F) at the outside to soften it and allow it to adapt to the edge of the part. (FIG. 18)



Figure 18

- › Apply the film over the whole surface using a felt-covered MARBLEU or LIBERTE squeegee.



Figure 19

- › Heat the film to a temperature ranging from 40 °C to 50 °C (104 °F to 122 °F). Then, using the squeegee, fold it over the adjacent edges of the part. (FIG. 19)

- › The application is complete and you can now start with the cutting of the film.

⚠ Take particular care when heating the stretched film. 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.

5. FOR A FULL VEHICLE WRAP:

For vehicles, avoid any application on the window and body panel seals, on any unpainted ABS plastics (trim strips, bumpers, rear-view mirror casings, etc.).

- › Whenever application to a horizontal surface is necessary, such as on bonnets 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 it is necessary to create seams, HEXIS recommend carrying out wallpaper cuts (cutting both films to obtain an edge-to-edge seam on the substrate). If necessary, once the cutting process is finished, apply a sealing varnish to the seam.

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

- › Make the hinge as indicated above (cf. "First steps and application of CANDYFENCE CF001 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.
- › Stretch the film over the door handles and, using a squeegee, apply the film all around the door handles. (FIG. 20)

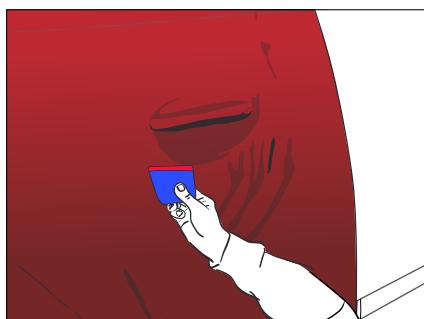


Figure 20

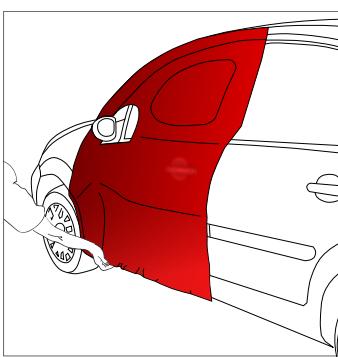


Figure 21

- › Once the door handles are done, stretch the film down to the bottom of the vehicle body. (FIG. 21)

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

6. 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.

6.1. Straight cut with overlap:

This method is to be used when the part to be wrapped and the adjacent part feature straight edges (FIG. 22). This concerns in particular the contours of head and tail lights, etc.

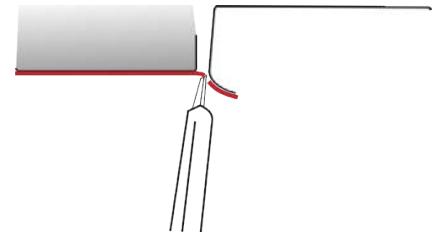


Figure 22

- › Wear gloves (SHAGGLOVE).
- › Use a cutter with a new blade.

- › Trace the contours of the area with your (gloved) finger. (FIG. 23)



Figure 23

- › 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. 24)

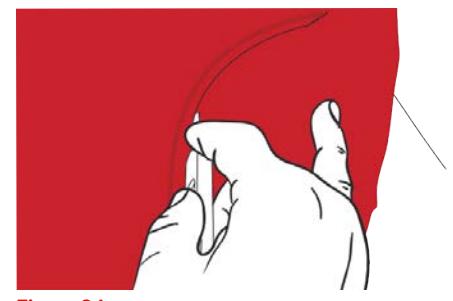


Figure 24

- › To finish, run the squeegee over the cut. (FIG. 25)



Figure 25

6.2. Straight cut without overlap:

This method is used for a cut along a seal or any trim that cannot be disassembled.

You can either:

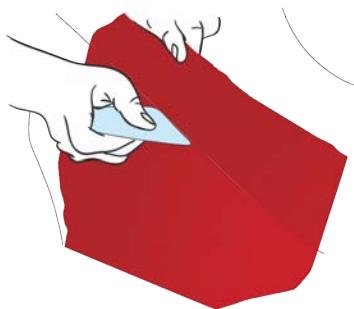


Figure 26

- › 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. 26)



Figure 27

- › 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. 27)

- › Remove any excess film.

or

- › For cutting, the cutter blade must be placed in flat position on the squeegee.
- › The squeegee + cutter blade must be parallel to the bodywork and perpendicular to the seal.

- › Slide the squeegee with the cutter blade to carry out the cut by always maintaining this blade inclination.

- › Remove any excess vinyl.

- › Firmly apply over the edges, round parts and adjacent or opposing areas. (FIG. 28)

- › Round off the corners of the film to ensure optimum adhesion of the cut film edges.



Figure 28

7. 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.

8. EDGE SEALING VARNISH:

The VR7077 sealing varnish must be applied only to reinforce the seal and adhesion of the edges of the CANDYFENCE CF001 film undergoing heavy external stress without modifying the adhesion properties of the films.

The VR7077 sealing varnish should only be applied to reinforce the seal between the edges of the CANDYFENCE CF001 film and the substrate.

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

- › Ensure that all surfaces are completely dry.

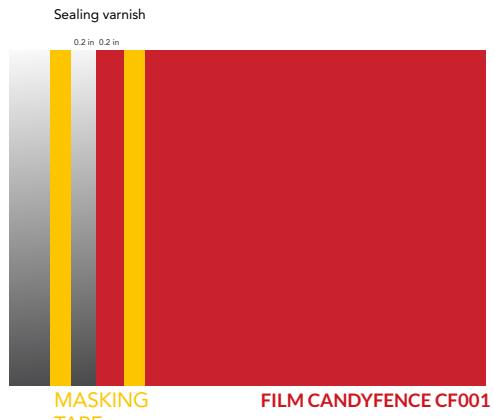


Figure 29

- › Apply 2 strips of masking tape.
 - 1 to the substrate at 5 mm (0.2 in.) from the CANDYFENCE CF001 film.
 - 1 to the CANDYFENCE CF001 film at 5 mm (0.2 in.) from its edge. (FIG. 29)

- › 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.*

9. FILM TREATMENT:

In order to keep your full wrap films clean for longer and make them easier to clean, HEXIS recommend treating them with the NANO SERUM by HEXIS as soon as you have finished the film application and then periodically. This surface treatment provides hydrophobic protection to the film, it gives a non-stick effect against aqueous compounds and external contaminants, and durably maintains the aesthetic appearance of the full wrap films.

The NANO SERUM by HEXIS must be applied by a qualified professional in a clean, dustfree, well-ventilated place away from sunlight (the NANO SERUM liquid is UV-sensitive).

HEXIS tip: Please refer to the technical data sheet of the NANO SERUM by HEXIS for the details of the liquid's application method.

Note: A slight change in the appearance of the film may be observed after treatment with the NANO SERUM by HEXIS, but this will not impair in any way the quality of the film. HEXIS consider this change in appearance to be normal, taking into account the addition of a NANO SERUM by HEXIS layer to the surface of the film, and will not accept any claim on this ground.

The protection of the NANO SERUM by HEXIS is effective up to 36 months, depending on the vehicle's exposure and maintenance conditions.

The protective effect of the NANO SERUM by HEXIS may be impaired and reduced if the vehicle is frequently cleaned with automatic rollers in car wash stations. The ceramic treatment loses its effectiveness when the water-repellent effect becomes irregular on the surface of the film.

⚠ *The NANO SERUM by HEXIS is a technical product that requires a meticulous application by a qualified professional. HEXIS cannot be held responsible for any traces of application, demarcations, rings, etc. visible on the film resulting from incorrect application of the product.*

HEXIS decline all responsibility in the case of inappropriate use or failure to comply with the safety instructions for all their products

10. CLEANING AND MAINTENANCE OF THE CANDYFENCE CF001 FILMS:

The CANDYFENCE CF001 film can be cleaned in various ways. Regardless of the method used, it must always be carried out on a cold bodywork.

Manual cleaning (method recommended by HEXIS):

Use SHAMPCARV2 and BODYRELOAD cleaning products with a car wash sponge and microfibre cloths.

Conventional automatic cleaning:

The CANDYFENCE CF001 film can be cleaned in any conventional automatic car wash, using cleaning products and detergents used for professional maintenance of vehicles and advertising equipment, provided they do not contain active foams.

High-pressure cleaning:

Exercise care when cleaning with high-pressure washers: apply medium water pressure at a minimum distance of 50 cm (20 in.) and a maximum water temperature of 35 °C (95 °F).

 *Caution: 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.*

 *Caution: Solvents and corrosive detergents must be forbidden.*

 *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; therefore, we are not accountable for these mechanical effects that may affect the film appearance.*

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

11. REMOVAL PROCEDURE:

The CANDYFENCE CF001 film features a special adhesive that makes it easy to remove.

- › Gently lift the corner of the film with the cutter without damaging the substrate.
- › Then proceed gradually by heating small areas while carefully removing the film.
- › The film should form a 70- to 80-degree angle with the substrate so as to limit the risk of leaving any adhesive on the substrate or tearing off the film.

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

- › Continue to 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.

 *Prior to treatment, perform a compatibility test on a small, inconspicuous surface area of the substrate to be treated. Certain plastic materials may be damaged by the SHAGREMOV product. HEXIS are not liable for damage and degradations caused to the substrate by using incompatible products.*

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

For further technical information, please refer to the Technical Data Sheets available for free download from our website www.hexitis-graphics.com, on the "Professionals" pages.

Due to the great variety of substrates and the growing number of new applications, the installer must check the suitability of the media for each application. All the published information does not however constitute a binding guarantee. The seller cannot be held liable for indirectly related damages and assumes no liability for claims that are higher than the replacement value of the purchased product. All specifications are subject to potential changes without prior notice. Our specifications are automatically updated on our website www.hexitis-graphics.com.

