

PRODUCT BULLETIN

APPLICATION GUIDE

Protection film: BODYFENCE

REQUIRED EQUIPMENT

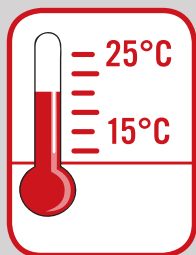
- › A 1 LITRE PULVERISAT VAPORISER
- › WATER + SOFT WASHING-UP LIQUID
- › A MARJO SQUEEGEE
- › A CUTOLOFA30 30° BLADE CUTTER
- › A LAMOLFA30 REFILL
- › A "SYSTEM 1-2-3" CLEANING LIQUID
 - › 1-REMOVER
 - › 2-PRE-CLEANER
 - › 3-FINAL CLEANER
- › PROTECH® SHAMPCAR CAR SHAMPOO
- › A SOFT CLOTH

STORE YOUR FILMS UNDER APPROPRIATE CONDITIONS

Keep off the films 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 50 % relative humidity.

Store your film in its original packaging, in a dry environment. The rolls are wrapped in sealed polyethylene bags and are maintained in their cardboard packaging by plastic suspension flanges 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. HEXIS also offers training sessions for professionals to achieve optimum results.

CHARACTERISTICS

BODYFENCE is a transparent self-adhesive film featuring an enhanced surface sliding, developed especially to protect automobile bodies. Thanks to its outstanding impact-proof properties, it protects your car body against chipping caused by gravel, insects, car doors bump, car wash brushes, etc. It also provides an excellent vandal protection.

PREPARING YOUR APPLICATION SURFACE

BODYFENCE film can be applied to any vehicle body as long as the surface is clean, smooth, non-porous and clear of any traces of oil, grease, wax, silicone or other polluting agents. To avoid unexpected results, always consider that every substrate is polluted and needs to be cleaned.

Remember to perform a preliminary test on a small surface area to check that the substrate remains undamaged.

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

CONTENTS

1. RECOMMENDATIONS:	2
2. PRELIMINARY TEST OF THE APPLICATION SURFACES:	2
2.1. Preliminary inspection of the substrate:	2
2.2. Tear-off test:	2
2.3. Outgassing test:	2
2.4. Outgassing procedure with flame treatment:	2
3. CLEANING:	3
3.1. Clean surface appearance:	3
3.2. Soiled surface appearance:	3
3.3. Heavily soiled surface appearance:	3
4. APPLICATION OF THE BODYFENCE FILM:	3
4.1. Straight cut with overlap:	5
4.2. Cut without overlap:	5
4.3. Finishing:	6
5. CLEANING AND MAINTENANCE OF THE BODYFENCE FILM:	6
6. REMOVAL PROCEDURE:	7

1. RECOMMENDATIONS:

- › The best adhesion of the BODYFENCE film is achieved after 24 hours of application.
- › BODYFENCE is usually used on the vehicle body areas the most exposed to aggression (bumper, bonnet, doors, etc.), however, it may also be used onto the entire car surface!
- › 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 closed immediately and properly (tape or roll-collars) after use in order to preserve all its qualities.

2. PRELIMINARY TEST OF THE APPLICATION SURFACES:

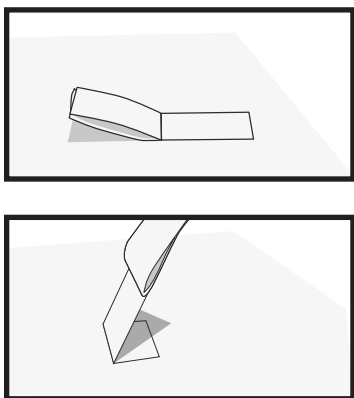
Before any application, the installer must primarily inspect the substrate and the paint to which the film will be applied.

The installer and the client are accountable 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) to outgas completely. An outgassing 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:



With a TESA® 7476 adhesive tape, or the like, apply on an area of 2.5 cm x 5 cm (1 in x 2 in) plus some leftover spaces to allow hand grip. Fold and quickly pull off perpendicularly to the substrate surface. No trace should remain on the removed adhesive. Repeat this process in several places.

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

2.3. Outgassing test:

Use a square of around 15 cm x 15 cm (6 in x 6 in) of adhesive polyester or of the film to apply. Wait for 24 hours or 2 hours at 65 °C (149 °F). If any bubbles appear, this means the surface has insufficiently outgassed. Therefore, this process should be repeated after several days; or else the procedure described below should be carried out.

2.4. Outgassing 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 in even and fast sweeps horizontally and vertically along the whole substrate surface.

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

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

> HEXIS is not liable for any bubbles caused by outgassing.

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 contaminations 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 surface appearance:

For vehicle wraps, it is advised to wash the vehicle with the SHAMPCAR vehicle body shampoo, then use the PRE CLEANER (product n° 2).

- › Spray it onto the surface.
- › Let it operate for few moments, then wipe it dry with a clean cloth.
- › Carry out a final cleaning using the FINAL CLEANER (product n° 3).

Shampcar
Concentrated vehicle
shampoo



3.2. Soiled surface appearance:

For vehicle wraps, it is advised to wash the vehicle with the SHAMPCAR vehicle body shampoo, then use the PRE CLEANER (product n° 2).

- › Spray it onto the dirty surface.
- › Let it operate for few moments, then wipe it dry with a clean cloth.
- › Carry out a final cleaning using the FINAL CLEANER (product n° 3).

Pre Cleaner
Powerful universal
cleaning agent



3.3. Heavily soiled surface appearance:

For vehicle wraps, it is advised to wash the vehicle with the SHAMPCAR vehicle body shampoo, then use the ADHESIVE REMOVER (product n° 1).

Work in a ventilated area. Wear protective goggles.

Prior to treatment, run a compatibility test on a small, non-conspicuous area of the substrate to be treated. Indeed, certain plastic materials might be damaged by the ADHESIVE REMOVER (product n° 1).

- › Spray onto the dirty surface and spread out using a dry cloth.
- › Then wait for few minutes. Spray again the ADHESIVE REMOVER (product n° 1), then wipe it dry with a clean cloth or squeegee.
- › When the substrate is clean and dry, clean again with the PRE CLEANER (product n° 2), then finish with the FINAL CLEANER (product n° 3) (as explained below).

Adhesive Remover
Powerful cleaning
agent



Final Cleaner
Cleaning and
degreasing finishing
agent



4. APPLICATION OF THE BODYFENCE FILM:

The minimum application temperature recommended is +10 °C (50 °F). Preferably, apply at between +15 °C and +35 °C (+59 °F and +95 °F).

Application is done by the «wet» method.

- › Prepare 1 litre PULVERISAT vaporiser using 2 ml (half a teaspoon) of soft washing-up liquid, supplemented with up to 1 litre water; this mixture will accelerate the adhesive properties of the film.



Figure 01

- › Measure the parts to be covered. Cut the BODYFENCE while leaving a margin of at least 10 cm (4 in) around the surface to be covered to stretch it during application, and avoid any finger marks. (FIG. 01)



Figure 02

- › Carefully separate the liner from the BODYFENCE. (FIG. 02)

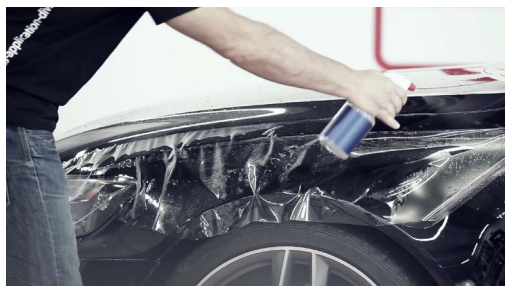


Figure 03

- › Spray the vehicle body with the vaporiser (starting with the engine bonnet, for instance) as well as the adhesive side of the BODYFENCE. (FIG. 03) This will enable a better positioning of the product on the vehicle.



Figure 04

- › Firmly stretch the BODYFENCE and apply it to the shape surface to be protected and wrap it. (FIG. 04)



Figure 05

- › To ensure that the squeegee glides easily, spray the (A) mixture onto the BODYFENCE film, then apply it with the MARJO, inclining it at 45°. Press firmly to adhere to the surface and remove water. (FIG. 05)

- › Considering the different existing paint qualities, it can be necessary to activate the adhesion by spraying the very concave and/or convex shapes with the soapy mixture.

Let pose for approximately 5 minutes, then stretch the film and apply it immediately.

- › Once the film applied to the engine bonnet, do the same with the rear of the vehicle, bumpers and doors.
- › Once the BODYFENCE film applied, cut as indicated:

4.1. Straight cut with overlap

To avoid scratching the paint, the cutter blade must never be perpendicular to the vehicle body.

- › Use a cutter knife with a new blade.
- › 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 as the cut with the blade is inclined towards the outside. (FIG. 06)
- › After the cut, 2 to 3 mm of the film (1 to 1½ in.) should be left over the edge of the vehicle parts.

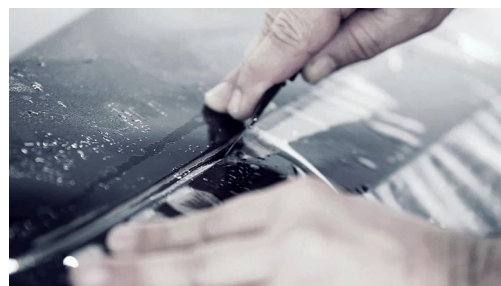


Figure 06

- › If there are no adjoining parts, cut the film surplus leaving just 2 to 3 mm of film (1 to 1½ in.). (FIG. 07)
- › Remove any excess film.

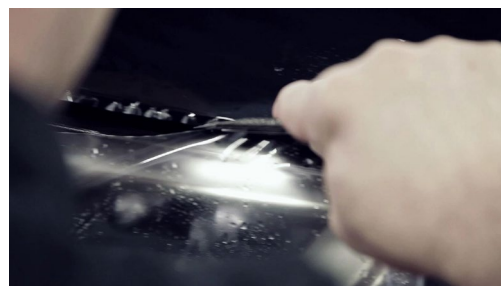


Figure 07

- › To finish, run the squeegee over the cut. Incline the squeegee towards the thinner edge (FIG. 08). Firmly apply over the edges, round parts and close areas.



Figure 08

- › Never finish a cut in a sharp angle. Always cut in rounded sections.

4.2. Cut without overlap

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

- › Use a cutter knife with a new blade.
- › Trace with your finger the contours of the part. Lift the vinyl of the adjacent part and drag it into the hollow using a squeegee, in order to shape the joint edge.
- › For the cut, the blade must be placed in a flat position, between the body and the joint, and perpendicular to the joint. When cutting, have the blade run carefully along in the same direction.
- › Remove any excess vinyl.

- › Never finish a cut in a sharp angle. Always cut in rounded sections.
- › Finish off by firmly running the squeegee over the cut.

4.3. Finishing



Figure 09

- › Place absorbent paper on the MARJO. Apply pressure to the cut edges to remove as much as humidity as possible. (FIG. 09)



Figure 10

- › Firmly apply the film with the squeegee, on the edges, rounded sections and adjacent or opposite faces of the body. (FIG. 10)



Figure 11

- › If wrinkles appear at the edge trim, press them with your finger for approximately 30 seconds. (FIG. 11)

5. CLEANING AND MAINTENANCE OF THE BODYFENCE FILM:

The BODYFENCE film can be cleaned by all conventional automatic cleaning protocol, using the cleaning products and detergents used for professional maintenance of vehicles and advertising equipment.

Nevertheless, clean carefully: apply medium pressure at a minimum distance of 50 cm (20 in) and a maximum water temperature of 35 °C (95 °F).

⚠ *Caution: However, do not to clean the film within the 48 hours following its application as this can affect the adhesion that may result in the film peeling off.*

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

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

⚠ *Car washes: the additive products and the condition of the rotating brushes can harm the adherence of the films. It is commonly admitted that after 10 car washes, the polyurethane paint becomes streaked; therefore, and in the same way, we are not accountable for these mechanical effects that can harm the film adherence.*

HEXIS tip: always test cleaning on a small area before cleaning the entire surface to be covered.

6. REMOVAL PROCEDURE:

The BODYFENCE film has a special adhesive designed to facilitate removal.

› Raise the corner gently with the cutter, without damaging the substrate, and gradually remove the film; the film should form an angle between 70° and 80° from the substrate surface.

⚠ *An angle more or less wide or acute will cause the film to break more easily.*

› Always proceed by small heated areas while slowly removing the film to limit the risk to leave adhesive on the substrate or to tear the film.

› Continue to pull the film away gently until it is completely removed while keeping a watchful eye on the heat brought, on the pulling angle of the film, and the pulling speed.

› If any adhesive remains on the substrate, take a cloth dipped in our ADHESIVE REMOVER (product n° 1) and rub the substrate until the marks disappear.

⚠ *Do not let the liquids in contact with the sealing gaskets or body joints.*

⚠ *Before handling any of our liquid products, refer to the technical data sheets on our website at www.hexis-graphics.com.*

For further technical information, please refer to Technical Data Sheets available on the "Professionals" pages on our website at www.hexis-graphics.com.

Because of the great variety of substrates and the growing number of new applications, the installer must check the suitability of the media for each application. The information provided does not constitute a binding warranty. The seller is not held accountable for not directly related damages beyond the replacement value of the purchased product. All specifications are subject to potential changes without prior notice. Updates of our specifications are automatically available on our website at www.hexis-graphics.com.



www.hexis-graphics.com

HEXIS S.A.

Z.I. Horizons Sud - CS 970003
F - 34118 FRONTIGNAN CEDEX
FRANCE
Tél. +33 4 67 18 66 80
Fax +33 4 67 48 38 79
E-mail: info@hexis.fr