

# PRODUCT BULLETIN

## APPLICATION AND REMOVAL GUIDE

# Protection film: HEXLIGHTS

### REQUIRED EQUIPMENT

- › Tesa® 50110 adhesive tape
- › Liquids for the cleaning of application surfaces:
  - › SHAGREMOV
  - › SHAGCLEAN
- › ProTech® SHAMPCARV2 car body shampoo
- › Squeegees of your choice from the catalogue
- › PISTHERMIQ heat gun
- › Different HEXIS application tools
- › SHAGRELOAD® cleaning agents

### STORE YOUR FILMS UNDER APPROPRIATE CONDITIONS

Keep the films away from all major sources of heat (radiators and heaters, direct exposure to sunlight, etc.): the ideal temperature ranges from 15 °C to 25 °C (from 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 flanges to prevent the windings from being crushed by their own weight.

Always store the rolls vertically.

### FEATURES

The HEXLIGHTS range is composed of black-tinted, ultra-transparent, adhesive, cast vinyl films, specially designed for the tinting of the protective glass of vehicles' headlights and taillights.

Due to the high technical performance and flexibility of the HEXLIGHTS films, they may be used on 3D 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, while not excluding the squeegeeing step for optimal adhesion of the film to the substrate.

### PREPARING YOUR APPLICATION SURFACE

The HEXLIGHTS films can be applied to head and tail lights of vehicles, as long as the target surface is clean, 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 (see chapter CLEANING: page 3).

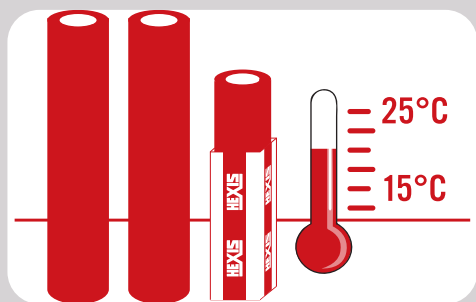
Do not forget to carry out a preliminary trial on a small surface to check that the substrate remains undamaged.

For further information on the films used, please refer to the technical data sheets available on our website at [www.hexis-graphics.com](http://www.hexis-graphics.com).

**!** *The HEXLIGHTS films are intended to be applied to exhibition vehicles or vehicles used on off-road terrains not suitable for public traffic (e.g. private lanes, circuits, etc.). HEXIS cannot be held liable for any non-compliance with the current legislation of the country of use. It is recommended to enquire about the current legislation in the country of use prior to any product implementation for applications other than those stated above.*

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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 best adhesion of the HEXLIGHTS films is achieved after 24 hours of contact.
- › After cutting the length of film required for the covering project, the remaining film must be stored on its original core (do not cut the rolls into several lengths, do not repack the product). The roll must be closed immediately and properly after use (tape or roll-collars) without applying any tension on the film in order to preserve all its qualities.
- › When applying HEXLIGHTS films to polycarbonate headlights and taillights of vehicles, only apply the vinyl to surfaces in good shape, which are not powdery or opaque.

## 2. PRELIMINARY TEST OF THE APPLICATION SURFACES:

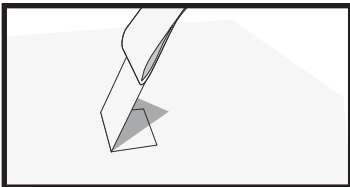
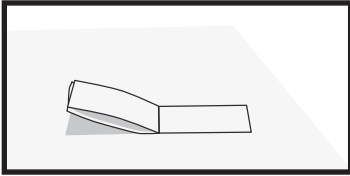
Before any application, the installer must first inspect the substrate to which the film will be applied.

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 varnish 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 varnish 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. No traces should remain on the ripped-off adhesive tape. Repeat this process in several places.

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


### 2.3. Outgassing 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. Therefore, this process should be repeated after a couple of days.

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

## 3. CLEANING:

You must clean the substrate 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](http://www.hexis-graphics.com).*

### 3.1. Clean and soiled surface appearance:

It is advised to wash the head and tail lights with the SHAMPCARV2 vehicle body shampoo, then carry out a final cleaning using the SHAGCLEAN product.

### 3.2. Heavily soiled surface appearance:

It is advised to wash the head and tail lights with the SHAMPCARV2 vehicle body shampoo, then use the SHAGREMOV product.

 Use the SHAGREMOV product 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 SHAGREMOV.*

- › 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.

 Refer to the Product Safety Data Sheet prior to use.

## 4. APPLYING THE HEXLIGHTS FILMS:

Recommended minimum application temperature: +15 °C (+59 °F). Apply preferably between +20 °C and +25 °C (+68 °F to +77 °F).

Due to their HEX'PRESS liner, it is mandatory to use the so-called "dry" application method with the HEXLIGHTS films, using a squeegee covered with new felt.

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

However, the HEXLIGHTS films must be firmly squeegeed to achieve optimum adhesion on the substrate.

Both the ambient and the substrate temperature must comply with the application temperature. Hygrometry may also influence the adhesion of the film to the substrate.

- › Measure the areas to be wrapped.
- › Cut the HEXLIGHTS film by leaving a margin of at least 10 cm (4 in) so as to be able to hold it taut during application and avoid leaving fingerprints. (FIG. 01)

- › Carefully separate half of the liner from the HEXLIGHTS film. (FIG. 02)

**SHAMPCARV2**  
Concentrated vehicle  
shampoo



**SHAGREMOV**  
Powerful cleaning  
agent



**SHAGCLEAN**  
Cleaning and  
degreasing finishing  
agent



Figure 01



Figure 02



Figure 03

- › Position the film on the bodywork and the head/tail light.
- › Apply one corner of the film to the substrate using a squeegee. (FIG. 03)
- › Completely remove the liner.



Figure 04

- › Stretch the film so as to completely wrap the head/tail light. (FIG. 04)



Figure 05

- › Pull on the bottom and then on the top of the film to reduce the tunnels that have formed during the previous step. (FIG. 05)



Figure 06

- › Apply the vinyl over the whole surface using a felt-covered plastic squeegee. (FIG. 06)

⚠ *Always squeegee from the centre towards the edges.*

Note: Firmly press the squeegee over the edges of the head/tail light, carefully wipe over the convex borders to smooth the film and eliminate any tension.

#### 4.1. Cutting:

- › Use a cutter with a new blade.
- › Trace the contours of the area with your finger.



Figure 07

- › For trimming the film, the cutter blade must be placed in a flat position on the head/tail light at a 45° angle in the direction of the cut. (FIG. 07)

- › Remove any excess film.

## 4.2. Finishings:

› Smooth the curlings at the head/tail light edges by applying pressure with the squeegee to make the film adhere to the surface of the light. (FIG. 08)



Figure 08

› Round off the corners of the film to avoid any risk of it peeling off from these areas. (FIG. 09)

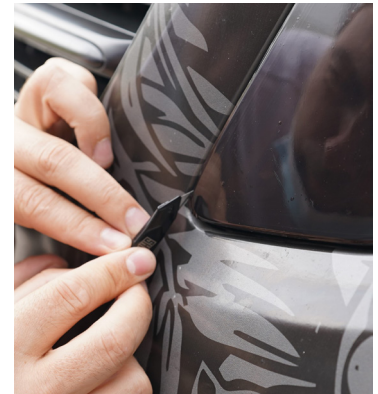


Figure 09

› Heat the edges of the film to 80-90 °C (176-194 °F) using a heat gun in order to accelerate the bonding process of the pressure-sensitive adhesive. (FIG. 10)



Figure 10

The application is complete. (FIG. 11)



Figure 11


## 5. CLEANING AND MAINTENANCE OF THE HEXLIGHTS FILMS:


For a complementary cleaning of the HEXLIGHTS films, use the SHAGRELOAD product with a clean microfiber cloth.


- › Spray directly onto the surface ( $\pm$  40 cm x 40 cm / 15 in. x 15 in.).
- › Wipe with a microfiber cloth before the product dries.


The HEXLIGHTS films 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).

 *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 are 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; 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.

## 6. REMOVAL PROCEDURE:

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


› Gently lift the corner with the cutter without damaging the substrate, and gradually remove the film, which has been heated; 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.

 *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](http://www.hexis-graphics.com).*

For further technical information, please refer to the Technical Data Sheets available for free download from our website [www.hexis-graphics.com](http://www.hexis-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 medium 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.hexis-graphics.com](http://www.hexis-graphics.com).

