

**PRODUCT
BULLETIN**

APPLYING AND REMOVING

Solar protection film

AUTOMOTIVE FILM

MATERIAL REQUIRED

- ✓ PULVITRE (1 l-litre vaporiser)
- ✓ MARJO flexible squeegee
- ✓ MARBLEU soft squeegee
- ✓ CONQUER multi-purpose squeegee
- ✓ CUTVITRE Olfa snap-off blade knife
- ✓ CUTLAME replacement blades
- ✓ MARNOIR medium squeegee for finishings
- ✓ White vinegar
- ✓ Detergent (washing-up liquid)
- ✓ Three 1-litre vaporisers
- ✓ Steel wool pad
- ✓ Absorbent paper
- ✓ Electric heat gun
- ✓ Indoor lighting
- ✓ LAME100 stainless steel blade for removing the film
- ✓ POIGNVITRE pro handle scraper with BLUEMAX soft and flexible squeegee
- ✓ Masking tape

STORING YOUR FILMS UNDER GOOD CONDITIONS

Keep films away from all sources of high temperature (radiators, direct sunlight...). The ideal storage temperature is between 15 and 25°C (59-77°F) with 50% relative humidity.

Store films in a dry place and in their original packaging – the rolls are packaged in waterproof polyethylene bags and held in place in their cardboard boxes by means of square plastic end pieces to prevent the wound turns from being crushed by the weight.

- A roll that is stored correctly can be kept for 1 year.
- NEVER STORE THE ROLLS UPRIGHT.



CHARACTERISTICS

HEXIS solar protection films for vehicles are top-of-the-range multi-layer and fully-thermoformable films. They have wide-ranging characteristics, making it possible to either reduce glare and visual fatigue for the people in the vehicle or prevent viewing of objects inside the vehicle, or prevent carjacking.

PREPARING THE TARGET SURFACE

HEXIS solar films can be applied to all types of vehicle windows, on the condition that these windows have a clean, smooth, non porous surface with no traces of oil, grease, wax, silicone or other polluting agents. To avoid any nasty surprises, work on the principle that all substrates are polluted and must be cleaned.

Do not forget to first do a test on a small surface to make sure that the substrate will not be damaged.

Do not hesitate to consult the product data sheets for the films used on our internet site, www.hexisgroup.com.

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These application methods are based on HEXIS' experience and are not restrictive. For easier application of HEXIS films, please respect these recommendations. HEXIS also offers training courses, which are necessary for optimal application of our products.

I- RECOMMENDATIONS

- ✓ Do not use the standard wetting and cleaning agents used for cleaning windows.
- ✓ Do not use a scraper, or any type of abrasion action article (particularly on ceramics).
- ✓ Never stick the solar film to the windscreen.
- ✓ In respect of the legislation in force in certain countries and for safety reasons, certain solar films must not be stuck to the front side windows.
- ✓ The outside of the windows make it possible to cut to the correct size the compound (solar film/adhesive/liner) and to thermoform it. The solar film itself will be put into position and stuck to the windows on the inside.
- ✓ All HEXIS solar films should be positionned on the inside of the vehicle.
 - See the Technical data sheets.
- ✓ During thermoforming, all tunnels should be formed vertically.
- ✓ Do not forget to fully protect the inside of the vehicle (seats, the insides of the doors...) against projections of liquid during the cleaning process and application of the solar film.

2- CLEANING

Both the inside and the outside of the windows must be cleaned.

- Prepare the 1 l-litre vaporiser with around 20 capfuls of detergent and water (A).
- Prepare the 1-litre vaporisers:
 - one with white vinegar (*take care when handling*).
 - one with the PULVITRE mixture (A) (to make handling easier).
 - one with a 95% detergent and 5% water mix. (B)
- Carefully clean the windows with the white vinegar and use the BLUEMAX squeegee on the entire surface of the window.
- Spray the soapy liquid (A) all over the outside of the window.
- Finally, use the MARJO squeegee to remove everything: all traces and all the water.

3-APPLYING THE FILM

The automotive films proposed by HEXIS should be applied to the inside of the vehicle (see Technical data sheets). The preparation process nevertheless takes place on the outside of the windows.

3-1 Sliding or side windows

1. The window must be cleaned on the outside and the window then closed.
2. Generously wet the outside of the window with PULVITRE and dampen a piece of absorbent paper with soapy solution (B) to make a horizontal strip in the centre of the window.
3. Put the compound in place in the following manner: the roll is vertical and the film is pulled off horizontally. (FIG01)
Reminder: the liner part should be facing you and the solar part facing the window.



(FIG 01)

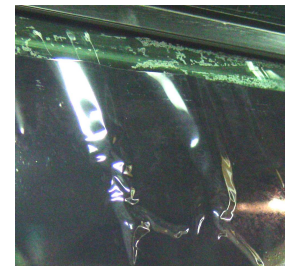
4. Cut the compound – right and left sides – 2mm from the seal joints.
5. Apply it to the centre following the soapy band with a squeegee.
6. Thermoform it from the central band, first at the top, then at the bottom. (FIG02)



(FIG 02)

7. Encourage vertical tunnels by heating (FIG03), then squeegee them out to make them disappear.

Warning: do not place the electric heat gun either too close to the film, or for too long.



(FIG 03)

8. Once the compound has been thermoformed, slightly open the window.
9. Align it at the bottom so as to cut the top of the complex right at the top of the window with the CUTVITRE. (FIG04)



(FIG 04)

10. Bevel the two edges of the compound at the top. (FIG05)

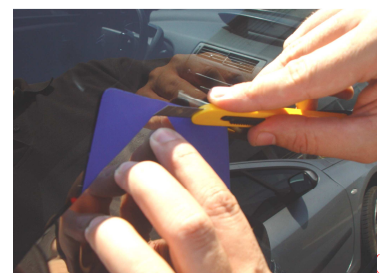


FIG 05)

11. Clean the inside of the window (once you have protected the inside of the doors) and moisten it generously.

12. Progressively remove $\frac{3}{4}$ of the liner, whilst generously wetting the liner-solar film separation. (FIG06)

Warning: do not make any dust.



(FIG 06)

13. Put the film into position at the top of the inside of the window (FIG07) and align the top of the film with the top of the window.

Be careful how you handle the film, make sure you do not « wrinkle » it.



(FIG 07)

14. Close the window, if the side window is mobile.
15. Slide the still-stretched film into the glass wipe seal first on one side then on the other, using the squeegee for help. (FIG08)
16. Wet the film again and squeegee it.
17. Wrap the MARNOIR squeegee in absorbent paper and run it around the inside edge of the window's seal joint.
18. If tunnels appear a few hours later, use the squeegee firmly yet delicately, bringing the air or water out to the edges. You can also heat the film slightly.



(FIG 08)

3-2 Rear quarters

Do as above but making the cut (FIG09) on the film previously « stuck » by the central soapy band using the squeegee and knife, on the outside of the window.



(FIG 09)

3-3 Rear window

1. The outside of the rear window must be cleaned.
2. With a sheet of absorbent paper moistened with soapy solution (B) make a horizontal strip on the outside curve in the centre of the window so as to be able to put the film into position.
3. Put into place the compound (FIG10) and cut the film to its approximate size.



(FIG 10)

4. Thermoform it starting with the section above the central strip.
5. Then thermoform the section below the central strip.
(FIG 11)

Warning: do not place the electric gun either too close to the film, or for too long.

6. Encourage vertical tunnels by heating, squeegee them more yet delicately, to make them disappear.

Warning: do not place the electric heat gun either too close to the film or for too long.

7. The compound for the rear window has now been thermoformed.
8. Prepare your knife and cut the solar film using the inside light to delimit the ceramic conductors: cut to 2 mm on the dark part. (FIG 12)

Warning: HEXIS cannot be held responsible for application of its films to deteriorated ceramic conductors.

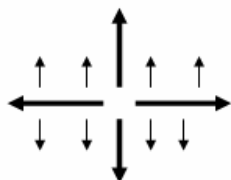
9. Prepare a clean window and wet it so as to be able to put the thermoformed compound for the rear window into position.
10. Clean the inside of the window : wet the window, scrape it with the wire wool pad and then use the BLUEMAX squeegee all over. (FIG 13)

11. Remove all the liner of the film by wetting it generously.
(FIG 14)

12. Put the film into position on the inside of the rear window.
(FIG 15)

13. Use the MARBLEU squeegee, respecting the direction : make a cross in the middle, then squeegee each of the four quarters strating from the middle and out towards the edges. (FIG 16)

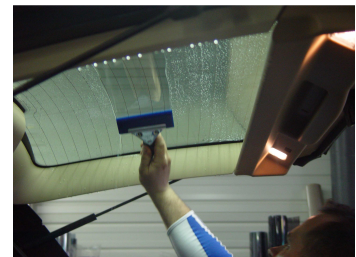
Reminder:



(FIG 11)



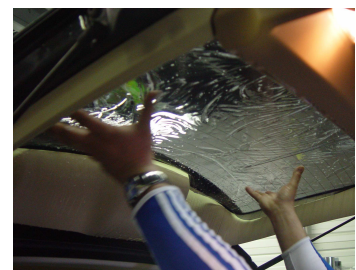
(FIG 12)



(FIG 13)



(FIG 14)



(FIG 15)



(FIG 16)

14. Finish the operation, insisting well on the edges up to the window seal joints with the MARJO squeegee. (FIG17)



(FIG 17)

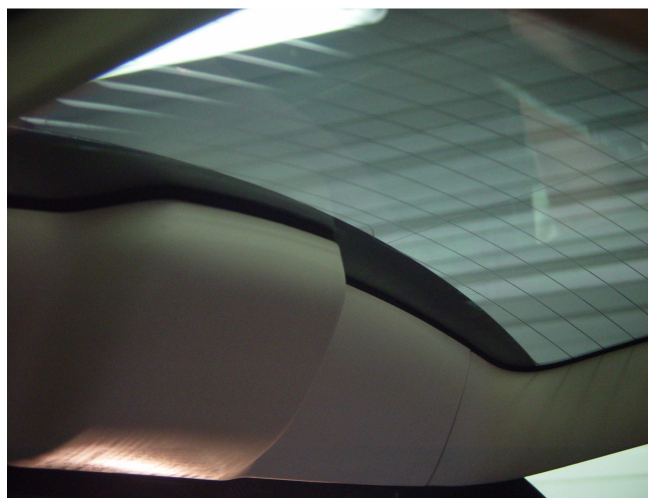
15. Delicately heat the edges using the MARBLEU squeegee so as to remove any drops of water and to fix the solar film « definitively ». (FIG18)



(FIG 18)

16. Wrap the MARNOIR squeegee in absorbent paper and run it around the inside edge of the rear window's seal joint.

17. The application is successful. (FIG19)



(FIG 19)

18. If tunnels appear after a few hours on the edges, use the MARNOIR squeegee to push the air or water out towards the edges.

4- CLEANING AND MAINTENANCE OF THE FILM

- ✓ Leave the film to dry for 3 days without touching it and without opening the windows.
- ✓ Wait for 30 days after application before cleaning the « filmed » window as if it were a normal window.
- ✓ Do not use any type of scraper or articles with an abrasive action.

5-REMOVING THE FILM

Films for vehicles use a permanent adhesive but, if you follow the instructions below, it will be easier to remove the film.

- ✓ Start in the corner.
- ✓ Gently lift up the film using a knife but without damaging the substrate. Progressively remove the film. The film should form an angle of 70-80° in relation to the substrate. A wider or narrower angle will result in the film breaking more easily.
- ✓ Always proceed gradually by delicately removing the film from small areas.
- ✓ If residue from the adhesive persists, generously soap the surface concerned with a sheet of absorbent paper moistened with a mixture of water and detergent.
 - Rear window:
 - Use the wire wool pad and carefully scrape the adhesive off, but without pressing (this could result in scratches).
 - Be careful with the conductors (ceramic) in the defrost zone !***
 - Other windows:
 - Use the LAMEI00 and remove the adhesive.

For any further information of a technical nature, please consult the technical data sheets available for download from our internet site www.hexisgroup.com in the Professionnals/Technical Data Sheet section.

The very wide range of substrates available, combined with the ever-increasing number of new possibilities, obliges the user to examine the extreme aptitudes of the product for each particular usage.

All the information given herein nevertheless does not constitute an absolute warranty factor. The sheller assumes no liability for any indirect damage and cannot be held financially responsible beyond the price of the his own products. All our specifications are liable to modification without prior notice. Our specifications are updated automatically on our site, www.hexisgroup.com.



HEXIS S.A.
Z.I. Horizons Sud
F - 34110 FRONTIGNAN

Tel.: +33 - 467 18 66 86
Fax: +33 - 467 48 36 98
www.hexisgroup.com