

GRAFITYP

selfadhesive products

MANUAL 6



PROTECTION FILMS

June 2017

What are Protection Films ?



These films are meant to protect the vulnerable parts of cars, bicycles, motorbikes, etc...

They are transparent glossy, so the underlying colour remains perfectly visible.

They make it possible to protect your bumper, your bonnet or the frame of your bicycle against stone chips, sand and scratches.

The vinyl is available in various qualities and for various applications.

GrafiGuard Thermo-plastic Polyurethane Films (TPU) are strong, sustainable and wear/impact resistant. They are easily deformable, as a result of which it is no problem to wrap a complete car. Available in three thicknesses : **GG10**: 100 micron - **GG15**: 150 micron - **GG20**: 200 micron

SCP Stone Chip Protection films : polymeric calendered transparent films with a high impact resistance. Less deformable than GrafiGuard TPU films. Not suitable for a full wrap.

SCP01: 120 micron - **SCP02**: 240 micron – **P110G and P110M**: 110 micron

Preparation

Before you start applying the protection films, make sure that :

- The object is suited to be protected with this type of film. How extreme are the deformations ?
- The surface is suited (no slightly structured plastic bumpers)
- The environment is suited for executing the job
- You have all necessary tools at hand



Attention !

A car must still have its original paint. If it doesn't, the new lacquer layer must have had at least 6 weeks to cure before you apply any vinyl on it.

The ideal environment for wrapping a vehicle is a well illuminated, dust-free environment with a constant temperature between 17 and 24°C. Furthermore, the vinyl should have acclimatized sufficiently. We also advise you to remove

unnecessary car parts before wrapping the car, like e.g. number plates, antennas, window rubbers, mirrors, etc...

GrafiGuard TPU Films

Tools

- a squeegee with a micro-fiber top layer
- a rubber squeegee
- a flexible undamaged Teflon squeegee
- a very sharp knife (cutter)
- a hot air pistol (heat gun) with adjustable air pressure and temperature
- a good, non-aggressive degreasing agent and/or silicone remover : isopropanol, ethanol or "Rapid Prep"
- micro-fiber cleaning cloths
- a spray bottle with a **TACK SOLUTION** of **isopropanol (15%) and demineralised water (85%)**. Using higher concentrations of isopropanol can affect the characteristics of the adhesive layer and damage the TPU, as a result of which the adhesive strength and the appearance may change.
- a spray bottle with a **SLIP SOLUTION** of **demineralised water (1L) and baby shampoo (10 drops)**.



Cleaning before wrapping

Clean the vehicle thoroughly.

As you will be applying a transparent protective layer on the car, each dirt particle will remain visible afterwards.

The first step is to use an insect remover, followed by a good wax free polish. Then make sure you degrease the vehicle thoroughly with isopropanol, ethanol or "Rapid Prep".

Make sure you don't forget the locations that are a bit harder to reach, such as the split between two car parts. If necessary, use cotton buds or wrap a piece of thin cleaning cloth around a squeegee. Make sure you remove all silicones from the car body – don't just wipe them to the edges.

Applying GrafiGuard Polyurethane Films

GG10 – GG15 – GG20

These films are **ALWAYS** applied **WET**.

It is important to rub the film everywhere, so the fluid between the car body and the film is completely removed. After a couple of days the sunlight will make the film ultra-clear and glossier. The adhesive layer has then completely bonded with the car body.



1. Cut a piece of vinyl from the roll, which is big enough to completely cover the car part to be wrapped.
2. Position the piece of vinyl on the car part and mark its position.
3. Make sure your hands are perfectly clean. By making them soaking wet (slip solution) you won't leave behind any fingerprints in the adhesive layer.
4. Lay the vinyl upside down on a table, remove the backing liner and spray a large amount of slip solution on the adhesive layer.



5. Spray a large amount of slip solution on the car body as well.
6. Place the vinyl as even as possible on the car body.
7. Now remove the transparent protective layer that is still on the vinyl. Do this under an angle of 180°.
8. Make the upper side of the film wet as well (slip solution). This makes it a lot easier to rub the film with your squeegee.



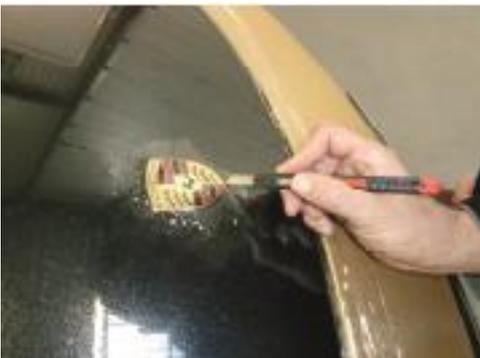
9. Start rubbing in the middle of the vinyl. Also rub towards the closest edge, making sure that the slip solution mixture can always be rubbed to the sides. Avoid air- and/or water bubbles. It is hard to puncture them afterwards.



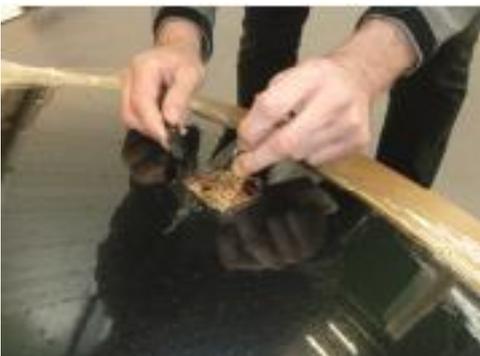
10. The vinyl will not stick very well on strongly deformed car parts. It will always tend to come off again. Gently remove the film again at those locations and spray a bit of the tack solution on both the car body and the adhesive layer. Rub the film again, and always keep the upper part of the vinyl wet with slip solution. If the vinyl comes off in the middle between two already well applied vinyl parts (e.g. a character line on a bonnet), spray the tack solution under the vinyl from the side, without tearing it loose. Then rub the vinyl again. It is possible that you have to repeat this action several time before the vinyl will perfectly bond with the car body.



11. A heat gun is used only if the vinyl needs to be deformed considerably at certain locations. Never deform the vinyl for more than 15%. An important difference with wrapping PVC films (GrafiWrap Automotive and Deco films) is the temperature setting. Polyurethane films require less high temperatures than PVC films. Set the heat gun to 250°C for detailed features, 350°C for deformations over somewhat larger surfaces. In this way the vinyl will be heated to a temperature of maximum 50 to 60°C. When rubbing the heated vinyl, pay attention that you don't rub any folds in it.



12. Applying the film around car logos that have not been taken off : rub the film on the car body until you reach the edge of the car logo. Cut the contour of the car logo with a very sharp knife. Make sure you don't cut completely through the film, as you could scratch the car's lacquer. This requires some experience, but once you have made an "incision" in the film, you can easily remove it at that location.





13. All excess material can be cut off with a very sharp knife. You can also use a razor blade for this job. Afterwards fold the vinyl around the edges. This will make the edges of the vinyl on the car body invisible.

14. Depending on the colour of the background, it may look after the application as if the GrafiGuard film is not crystal clear. The transparency will return after a couple of days, when the adhesive has reached its final adhesive strength.

15. Small rubbing scratches will disappear by pouring hot water over them.

Maintenance and cleaning

- Wait for at least 72 hours before going to a car wash.
- After this period of time you can maintain the car in the usual way with a good car shampoo.
- Please **DON'T use any strong chemical products**, like e.g. isopropanol or citrus cleaner, to remove tar spots, insects, etc... They can damage the film. Always use mineral-based cleaning agents.
- Waxing is optional. Don't do this mechanically. Preferably use a polymeric-based fluent wax. This type of wax does not leave behind any traces at the edges.
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Removal of the film



- Never remove the film without heating it with a heat gun first. Heat the car body to a temperature of about 50°C.
- Pull the film off under an angle of about 135 to 180°. In this way, hardly any adhesive will stay behind.

1. GrafiWrap Stone Chip Protection Film

SCP01 and SCP02 / P110M and P110G

Tools

- a squeegee with a felt strip at one side (SPAVELC), or a hard squeegee with a separate felt squeegee (SPATEL & VILT08),
- a very sharp scalpel (cutter),
- a heat gun with regulatory air pressure and temperature,
- soft, clean, fluff-free gloves (GLOVE1),
- a good, non-aggressive degreasing agent and/or silicone remover, isopropanol, ethanol or "Rapid Prep",
- cleaning cloths

Cleaning and/or degreasing the vehicle

The vehicle or object should be cleaned a day in advance of wrapping (by hand or in the car wash, but without using wax). Why a day in advance ? So that you can be completely sure that everything is completely dry, and that no water will run out from the rubber trims or indents.

We are using isopropanol, ethanol or "Rapid Prep" for degreasing the vehicle properly. Pay special attention to deep recesses. A tissue wiped over a small area and discarded after short use will prevent silicones being moved around. Also pay special attention to "hidden" areas and areas that are hard to reach, such as the backside of the wheel housing.

Applying the films SCP01 and SCP02 Applying the films P110M and P110G

1. Small pieces

They can be applied in exactly the same way as GrafiGuard films. Application with slip solution gives nicest result.



2. Slightly deformed surfaces can be applied in 1 piece

The bonnet of this car is deformed only slightly.

It can be protected in one piece. In this case, the film can be applied wet as well as dry.

In case of dry wrapping, it is easier to fold the film around the edges afterwards. In case of dry wrapping, you may see some rubbing stripes in the glue afterwards. These stripes will automatically disappear after some time.



In case of wet wrapping, the chance of air bubbles getting entrapped or rubbing stripes appearing in the glue becomes a lot smaller. However, this method is only advisable if the part to be wrapped does not or hardly show any deformation. It will also take longer for the film to reach its final adhesive strength.

3. Strongly deformed surfaces are wrapped in various parts.

The bumper of this car is strongly deformed and can not be wrapped in one piece with these films. SCP and P110 are polymeric calendered films and can not be deformed in the same way as a TPU film.

The bumper is divided into various parts. We always work in a "draining" order. So We always start with the bottom parts and work our way from the back to the front.



Parts A and B can probably be wrapped in one piece.

Because of the deformation, the film needs to be applied dry.



Then we continue with part C. Make sure you have an overlap of about 5 mm with parts A and B.



The last part of the bumper (D) is also applied with an overlap of 5 mm on the parts B and C.

