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Manual

Paint Protection Film

November 2020

What are Protection Films?

These films are meant to protect the vulnerable parts of cars, bicycles, motorbikes, etc…
They are mostly 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 film is available in various qualities and for various applications.

GrafiGuard Thermo-plastic Polyurethane Films (TPU) are strong, sustainable and wear/impact resistant. The 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.

GrafiGuard SELF HEALING is a TPU film with a self healing top layer, thanks to which scratches disappear automatically. Thickness 150 micron, and available in **glossy** (GGSHG15), **matt** (GGSHM15) and **black high gloss** (GGSHBG15)

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 by this type of film. How deep 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 layers 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…

1. 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 goode, non-aggressive degreasing agent and/or silicone remover: isopropanol, ethanol or surface cleaner.
- micro-fiber cleaning cloths
- a spray bottle with a **TACK SOLUTION** of **isopropanol (10%) and demineralised water (90%).** Using higher concentrations of isopropanol can affect the characteristics of the adhesive layer and damage the TPU, as a result of which the adhesive strengt hand the appearance may change.
- a spray bottle with a **SLIP SOLUTION: 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 remained dirt particle will be visible afterwards.
The first step is to use an insect remover, followed by claying and a good wax free polish. Then make sure you degrease the vehicle thoroughly with isopropanol, ethanol or surface cleaner.
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 – GGSHG15 – GGSHM15 – GGSHBG15

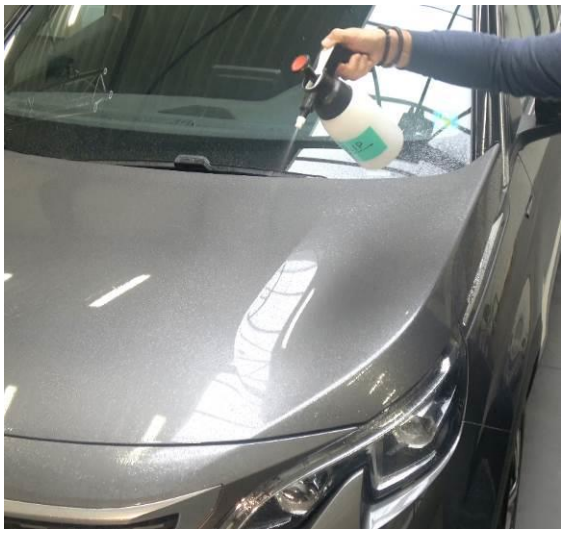
These films are **ALWAYS** applied **WET**.
It is important to rub the film everywhere, so the fluid between the car body and the film is completely removed.

1. Cut a piece of film from the roll, which is big enough to completely cover the car part to be wrapped.

2. Position the piece of film 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 film upside down on a table, remove the backing liner and spray a large amount of water/shampoo (slip solution) on the adhesive layer.



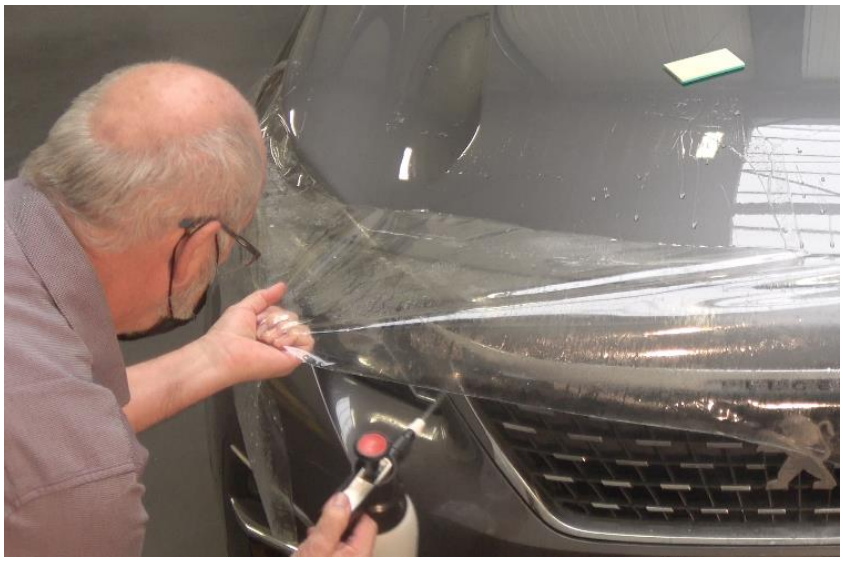
5. Spray a large amount of slip solution on the car body as well.

6. Place the film as even as possibl on the car body.

7. Now remove the transparent protective layer that is still on the film. Do this under an angle of 180°.

8. Make the upper side of the film wet as well (with slip solution). This will make it a lot easier to rub the film with your squeegee.

9. Start rubbing in the middle of the film. Always 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 film 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 film wet with the slip solution.

11. A heat gun is used only if the film needs tob e deformed considerably at certain locations and at the edges. Never deform the film 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 film will be heated to a temperature of maximum 50 to 60°C. When rubbing the heated film, pay attention that you don't rub any folds in it.

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

13. Depending on the colour of the background, it may look after the application as if GrafiGuard GG10, GG15 and GG20 is not really crystal clear. The transparency will return after a couple of days, when the adhesive has reached its final adhesive strength.

14. Leave the car inside for a least one more night, so you can perform a torough check the next day.

Maintenance and cleaning.

- Wait for at least 72 hours before washing the car.
- 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. isopropanos or citrus cleaner, to remove tar spots, insects, etc… They can damage the film. Always use mineral-based cleaning agents. Always do a test on an unused piece of film.
- Waxing is optional. Don't do this michanically. Preferably use a polymeric-based fluent wax. This type of wax does not leave behind any traces at the edges.

Removal of the film.

- Never remove the film without heating it first with a heat gun. 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.

2. GrafiWrap Stone Chip Protection Film (polymeric 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 knife (cutter),
- a hot air pistol (heat gun) with adjustable 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 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 surface cleaner 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 the nicest result.

2. **Slightly deformed surfaces can be applied in one piece.**

The bonnet of this car is deformed only slightly.

It can be protected with SCP01 or SCP02 in one piece.
In this case the film can be appied 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 withl SCP films.

SCP and P110 are polymeric calendered films and can not be deformed in the same way as a TPU film.
Therefore the bumper is divided in several Parts,which are all wrapped separately
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