

## SOTT Wrap Essentials™ films

The SOTT WrapEssentials™ series is a high-quality cast PVC wrap film. This soft, flexible PVC film has special properties, as described below, but one of its main selling points is the possibility to manufacture it in virtually any color, optionally even with the same color depth of exclusive automotive paints.

SOTT WrapEssentials™ is at the technological forefront of the carwrap industry.

SOTT Wrap Essentials™ is extremely conformable and ideal for automotive as well as industrial and marine applications.

### PROPERTIES (shortened; see the technical data sheet for full details):

Roll width:	152cm (60")
Roll length:	22,85m (25yd) of 45,7m (50yd)
Stretchability:	190 %*
Thickness:	100-140 micron (4 - 5.2 mil (depending on color and special aspects of film) #
Adhesive:	Automotive-X SOTT-AX44RPS acrylate solvent with micro air channels, repositionable.
Structure:	Unique MLS system (consists of several layers)

### ADDITIONAL INFORMATION

Improved, chip resistant on vehicles in normal use. In extreme applications, such as at very high speeds, e.g. in automotive sports and racing, SOTT advises laminating with SOTT SS-3410 or PS-3480 film.

Automotive X-adhesive (repositionable, even when firmly applied. Adhesive starts bonding several hours after application). Removable without adhesive residue when film is heated up during removing.

Can be worked into channels and swages\*\*.

Structure: MLS system (multiple layers incorporated into one film, see illustration)

Color radiance same as car paint

High gloss rating and color intensity (GLOSS): especially on creases and curved surfaces

Deep color glow (MATT): especially over creases and on curved surfaces

The film can be repositioned, conformed and corrected infinitely without affecting adhesive and/or structure of the film.

*\*Read: stretches 90% beyond its original size. Color may change because of stretching.*

*# Since certain color depths of color structure can be difficult to achieve, in some cases a slightly thicker vinyl is used, which makes for a desirable end result. In most cases this makes the film stronger and less prone to tearing during installation.*

*\*\* When to apply SOTT assembly technique. Read: InstallationGuide SOTT-IG-03. An installer who is authorized by SOTT can offer 100% installation warranty.*

*# # Some colors can have reduced stretchability because of amount of metallic pigments.*

## DETAILS

SOTT WrapEssentials™ offers every installer the freedom and ability to deliver a perfect installation without compromises that is finely worked in the smallest detail. This high-grade cast film has many special characteristics that make it the best car wrap film in the world in the opinion of many car wrappers. Here is a summary of the facts:

### **Corrections**

You can apply the film, squeegee it and pull it away again without changing or activating the adhesive structure. Even if the film was stretched, you can heat it up and make it return to its original shape and size, ready to be reapplied. The adhesive layer will be undamaged.

### **Pressure lines and squeegee marks**

In contrast to many other films, this film shows practically no pressure lines in the adhesive during installation and stretching. Any lines in the surface of matte films will disappear when heated up.

### **Color, structure and sharp creases**

The color of the film often changes when it is stretched. This is a consequence of the pigmentation of the pvc during production. SOTT takes this into account and makes sure that this effect is kept to a minimum or even entirely prevented. This keeps colors intact, even when stretched extremely in deep channels and over creases. SOTT WrapEssentials™ can even be crumpled up and uncrumpled without any visible creases or kinks. Just warm up the film and the creases will disappear like melting snow in the sun. Even the adhesive layer remains undamaged and ready for use.

### **Resistant under the following circumstances**

#### **1) Creases and channels (if applied correctly)**

If the film is installed in channels and swages in the right way, it will not release from the substrate. (Please read: InstallationGuide SOTT-IG-03). To avoid all risk we recommend installation in smaller increments, to avoid build-up of tension in the film.

#### **2) Petrol, diesel and mildly corrosive liquids**

Edges near fuel caps and fuel tanks are no problem for SOTT WrapEssentials™. The film will not curl up when brought in contact with these fluids. Simply make sure there is no tension along the edges and that the film is vigorously pressed onto the substrate.

#### **3) Pressure washers and steam cleaners**

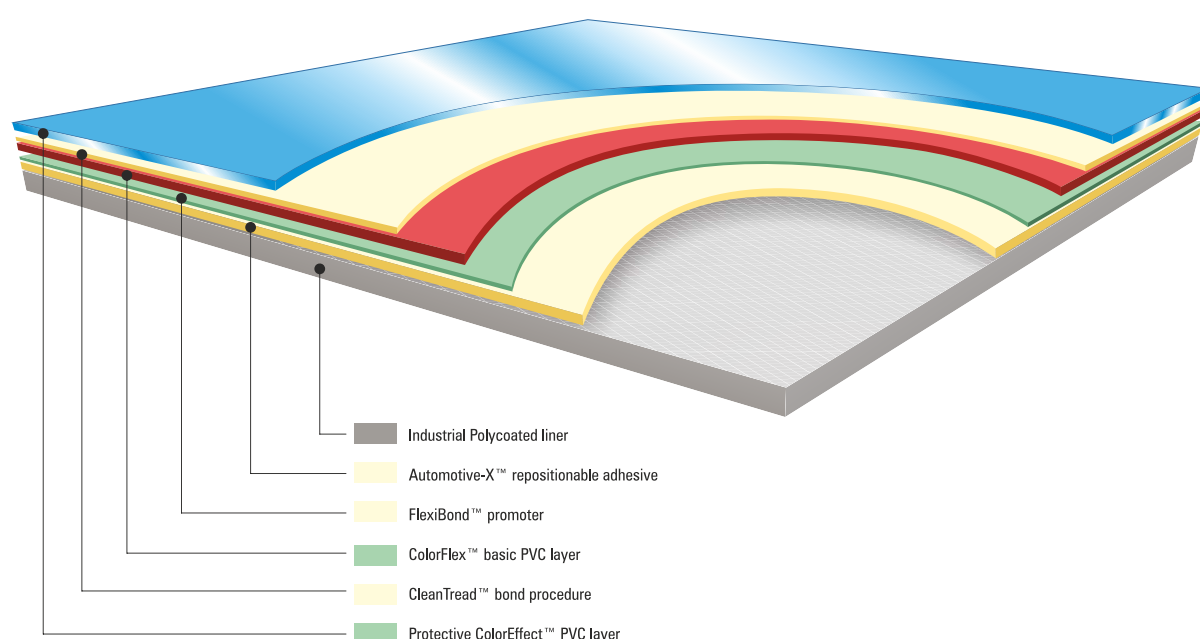
Film edges will not curl up when cleaned with these methods. However, do not hold the nozzle of the pressure washer closer than 12" (30cm) to the film edges and only at a 90° (perpendicular) angle to the surface. Just make sure that edges are pressed down vigorously. Please read the heading IMPORTANT and the guidelines in our installation leaflets. To be entirely sure and avoid any risk (especially in applications that put a heavy strain on the edges by means of friction, or that are continuously subject to water jets and temperature fluctuations) we recommend the use of SOTT 600- AA1400 Adhesive Activator for all edges and cover the edges afterwards with SOTT SealTape 400-005.

### STRUCTURE

SOTT WrapEssentials™ has a different structure than conventional films. SOTT WrapEssentials™ consists of various layers that can absorb film tension during extreme stretching and conforming. The top layer consists of a transparent pvc film, adding additional color depth. In between the various pvc layers a special treatment causes the layers to feel like one homogenous, extremely soft and flexible film that is extremely easy to apply and install.

Note: some colours contain a high concentration of metal pigment particles in various shapes and sizes (which create the special colour effect of the WrapEssentials™ film). Stretching affects their colour intensity. Always test the effect of stretching before installing.

### Structure illustration SOTT Wrap Essentials™ film series



### APPLICATIONS

SOTT CustomWrap has for years been applied successfully in the following market areas:

#### Automotive

- Car wrapping
- Fleet marking
- Accent designing
- Striping

#### Signmaking

- Signing and lettering
- Fleetmarking
- Digital Printing (UV and latex)

#### Industrieeel/OEM

- Excavators, cranes, etc.
- Container trains, train carriages, refrigerators, cabinets, kitchens, furniture, etc.
- Small and large machines

#### Nautica

- Boat wrapping
- Yacht wrapping (incl. under water line)\*\*
- Jetskis

\*when to apply SOTT assembly technique. Read: InstallationGuide SOTT-IG-04.

\*\*Exclusively applied to some individual colours to increase opacity

### DURABILITY

By the method in which SOTT EssentialsWrap™ is manufactured, plus the added high-grade ingredients, a PVC carwrap film is produced that has a long life expectancy. However, life expectancy is relative, since installers, users and applications vary.

A film on location A can be exposed to petrol fumes and gas, but always be protected against the elements, whereas on location B the same type of film is exposed to sea water or extreme heat. We have assumed a certain average daily use that exposes the film to a certain extent to: seawater, sunlight, petrol/diesel, petrol or diesel fumes, degreasers and cleaning agents, pressure washers, steam cleaners.

The life expectancy mentioned here is based on:

- realistic results of wraps that were applied all over the world over a period of years
- realistic results during the life of a car (= the time the car is in the possession of the person who had the wrap applied)

Test areas: Northern Europe, Western Europe, Eastern Europe, Southern Europe, Africa, Qatar, Dubai, Egypt, Malaysia, Australia, China, Japan, Canada, Brazil, North America, Canada, Ireland, Great Britain.

Life expectancy, based on tests and experience:

Applied to cars and motorcycles*:	Sides/vertically installed <sup>2</sup>			Roofs, hoods etc./horizontal <sup>3</sup>		
COLOR TYPE	ZONE 1	ZONE 2	ZONE 3	ZONE 1	ZONE 2	ZONE 3
<b>Opaque (matt/gloss)</b>	5 years	5 years	4 years	2 years	2 years	1 year
<b>Metallic (matt/gloss)</b>	4 years	4 years	4 years	2 years	2 years	1 year
<b>Pearlescent (matt/gloss)</b>	4 years	4 years	4 years	2 years	2 years	1 year

\*Applied according to SOTT recommendations. This includes all vehicles, such as trucks, trains, scooters, etc.

Applied to boats and jet skis:	Sides/vertically installed <sup>2</sup>			Roofs, hoods etc./horizontal <sup>3</sup>		
KLEURSOORT	ZONE 1	ZONE 2	ZONE 3	ZONE 1	ZONE 2	ZONE 3
Installation above the waterline #						
<b>Opaque (matt/gloss)</b>	2 years	2 years	2 years	2 years	1 year	1 year
<b>Metallic (matt/gloss)</b>	2 years	2 years	2 years	2 years	1 year	1 year
<b>Pearlescent (matt/gloss)</b>	2 years	2 years	2 years	2 years	1 year	1 year
Installation below waterline #						
<b>Opaque (matt/gloss)</b>	1 year	1 year	1 year	1 year	1 year	1 year
<b>Metallic (matt/gloss)</b>	1 year	1 year	1 year	1 year	1 year	1 year
<b>Pearlescent (matt/gloss)</b>	1 year	1 year	1 year	1 year	1 year	1 year

#Applied in compliance with SOTT recommendations. Edges and seams must be sealed.

Above-mentioned lifetimes refer to the releasing/lifting of the film. It does not refer to flaking, delaminating, scratching, discolouration and other damage as a consequence of physical scuffing, impact or abrasion.

<sup>2</sup> When properly installed in accordance with the SOTT guidelines. See Installation Guide SOTT-IG-03.

<sup>3</sup> if no wax or other protective substances are applied, other than SOTT 600-CP45, exclusively on glossy films. Also, SOTT guidelines must be adhered to. See InstallationGuide SOTT-IG-03.

### IMPROPER USE & EXPECTATIONS

SOTT products are specifically produced for the professional market; only authorized installers and other professionals can claim the warranties described in this document. When WrapEssentials™ are used for applications other than those listed in these criteria, no warranty can be offered. In no event shall SOTT be liable for any damages, directly or indirectly, through its supplied products.

SOTT warranties do not apply to stainless steel substrates.

SOTT's warranties only cover replacement of supplied materials, not cost for work, additional and/or indirect costs incurred. SOTT shall look at each case and assess it individually.

ZONE 1	ZONE 2	ZONE 3
<p>Benelux</p> <p>Germany</p> <p>Eastern Europe</p> <p>Great Britain</p> <p>North America <i>(except states listed in Zone 3)</i></p> <p>Austria</p> <p>Scandinavia</p> <p>Switzerland</p> <p>South America <i>(except countries listed in Zone 3)</i></p>	<p>Australia <i>(except countries listed in Zone 3)</i></p> <p>Asian countries</p> <p>China</p> <p>France</p> <p>Greece</p> <p>India</p> <p>Italy</p> <p>Korea</p> <p>Mediterranean Islands</p> <p>New Zealand</p> <p>Spain</p> <p>Turkey</p> <p>Korea</p> <p>South Africa <i>(all coastal regions)</i></p>	<p>Australia ie <i>(Western Australia, all northern territories, Queensland)</i></p> <p>Caribbean islands</p> <p>Mexico</p> <p>Middle East</p> <p>North Africa <i>(Including Sahara)</i></p> <p>North America <i>(FL, AZ, NV, NM, JX, CA, UT desert ranges)</i></p> <p>Northern Argentina</p> <p>Northern Colombia</p> <p>Northern Venezuela</p> <p>Paraguay</p> <p>Persian Gulf</p> <p>Uruguay</p> <p>South Africa <i>(Central areas)</i></p> <p>Areas higher than 1500m above sea level</p>

Vertical applications refer to applications placed at 90°, with a deviation of up to 10°. A deviation of more than 10° is measured as a horizontal application.

SOTT Wrap Essentials™ films were thoroughly tested for durability under various climatic conditions in European countries, but also in Florida, Arizona and California. Some colors may have a different life expectancy in that there may be some discoloration. This is inherent to the natural properties of the (color) pigments in the metallic and pearlescent particles. Horizontal exposure will shorten its life expectancy.

SOTT WrapEssentials™ films can be clean-removed, meaning they are removable without adhesive residue. We recommend using only SOTT special tools for an optimal result at film removal. Use a heat source such as a hot air gun or an infrared radiator. Clean film removal specifically means: there must not be any adhesive residue on 25% or more of the entire substrate surface.

*Information provided was acquired to the best of our knowledge through experience and testing. No rights can be derived from it.*

### IMPORTANT

SOTT WrapEssentials™ contains a special adhesive layer called Automotive-X.



It is somewhat 'harder' than other adhesives which gives you time to reposition and facilitates installation. However, some caution is required. Carwrappers are used to pressing the film gently and essentially just "stroking" the film. That does not work for WrapEssentials™. The film must be pressed firmly onto the substrate, so the adhesive can do its work after a couple of hours. The adhesive usually achieves optimal adhesion after 24 hours.

Make sure to press the edges extra firmly during heat-fixing. Use the SOTT-400-HM2000 heat gun or the 400-BB2235 torch to heat to the film to 100-110 degrees Celsius. Afterwards, keep pressing the film until it cooled down to about 40-45°C.

Extensive installation tips are available on the SOTT data sheets, type SOTT-IG-03.

### CLEANING & DEGREASING

Cleaning and degreasing the surface thoroughly is essential for a perfect wrap. Below follow the steps for preparing the vehicle for installation:

#### 1) Street dirt and undercoat or tar

Make sure the car is first thoroughly washed and all dirt is removed. Any wax or paraffin product must be removed from the surface before wrapping is begun. Undercoat, tar and wax can be removed with 600-T800 SOTT Industrial Remover.

Hardened tar and other tough dirt can be removed with the following tools without damaging the paint: 300-008 LilGripper, 300-163 3M ScotchBrite, 300-021 SOTT UltraClean cloth.

#### 2) Degreasing the surface

Use 600-SC02 SOTT Surface Cleaner-II for general degreasing. Use the Hustler squeegee 150-090 wrapped with a Ultra Clean white cleaning cloth (300-021) to clean all the little gaps and crevices between taillights, bumpers and rubber door seals. Thoroughly rub dry.

**Dust and dirt** from gaps and crevices can suddenly appear during installation. Take preventive measure to avoid this.

1) Use compressed air to blow out and dry all gaps. Do not forget to blow between rubber seals of doors, windows and roof. When blowing off the bumpers, use your fist to hit body elements, releasing dirt out of the gaps.

2) Use 5 cm wide masking tape SOTT 600-645 to mask the edges of any grilles. During film installation there may be particles of dust and debris released out of grille gaps and end up under your film. Masking tapes prevents this.

This is also a good method for masking head lights, indicator lights and chrome elements. It prevents that the film gets stuck to these plastic parts during installation. Masking those parts is a good idea.



### CLEANING & DEGREASING (cont'd)

**Adhesion** can be a problem with modern cars. This has to do with the characteristics of today's car paints. These are mainly water-based and contain silanes#.

The tack on this type of car paint is lower and so this is a risk factor especially at edges and in deep recesses and channels where films are installed with tension. Correct installation according to SOTT guidelines is therefore an absolute necessity.

It is possible to increase tack by using a neutralizer or primer that optimize adhesion in those areas (swage, channel or edge). This is what SOTT AA-1400 Adhesive Activator does. It forms a "link" between the silicon compounds and the film adhesive.

Simple use a little primer on a clean cloth and rub it on the surface area. Wait 15 min until it dries to a white haze. Install your film on top of it, then heat-fix the spot, as described in guideline SOTT-IG-03. Primer residue can simply be wiped away with SOTT SurfaceCleaner-II. Important: the primer does no harm to the paint. Do not use the wet application method in conjunction with AA-1400 Adhesive Activator. Please read detailed explanation about usage and effect of AA-1400 Adhesive Activator on sheet SOTT-IS-AA1400

*#Silane is a silicon compound. Silanes contain silicone molecules which improve adhesion of automotive paint to its substrate and distribution of paint on the surface. They do, however, have a negative effect on the adhesion of the film.*

### SQUEEGEEING

The proper squeegee pressure is achieved with the grey 150-LM10 SOTT squeegee, combined with 500-045 SOTT protective felt. This squeegee is flexible and easily adapts to the shape of the surface. Squeegee in overlapping strokes from in to out.

Read more information on the subject in our installation instructions: SOTT-IG

### HEATFIXING/FINISH

After installation, the stretched areas of the film and the critical areas and all edges must be heat-fixed with a heat gun to remove all tension from the film. This method virtually "casts" the film into its new shape. Use the SOTT-400-HM2000 heat gun or the 400-BB2235 torch to heat to the film to approx. 100-110 degrees Celsius. Afterwards, keep pressing the film until it cooled down to about 40-45°C. Extensive installation tips are available on the SOTT data sheets, type SOTT-IG-03.

Ask your local distributor in your country or visit:

[www.sott-international.com](http://www.sott-international.com) or [www.sott-products.com](http://www.sott-products.com) for sales outlets and additional information.

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