Twisted Throttle’s installation notes for temporary paint protection film:

The film included with Bags-Connection soft luggage is Oracal 620 Print Vinyl (http://www.orafol.com).

This film is intended for use with soft luggage that comes in direct contact with painted parts of your motorcycle.

It typically protects against minor scuffs caused by tankbag abrasion; not for use in protection against rock strikes.

This self-adhesive film can be applied to most painted surfaces for short-term outdoor use between luggage and a motorcycle's painted surfaces.

Paint protection film can be safely left applied for a few months to a year, but isn't intended for permanent application.

We install a fresh set of film on our bikes each spring, then peel it off when we put our bikes away for the winter.

Leaving ANY brand of paint protection film in place for much more than a year risks peeling off your bike's paint. It is never meant for use over airbrushing, pinstripes, repainted vehicles, stickers, or other graphics - it may take those graphics OFF when the film is removed from the bike. It is only intended for use over original OEM vehicle manufacturer paint jobs.

That said, the manufacturer's documentation states that the film is typical removable within 1-2 years from most surfaces without residue. YMMV.

Additional installation and technical information follows on the next two pages.
**IMPORTANT – PLEASE READ CAREFULLY BEFORE APPLICATION**

**Application Instructions: Temporary Paint Protection Film**

**Step 1:** Proper cleaning and Preparation of Substrate (Surface film will be applied onto). Film and substrate must be at room temperature (60°F - 85°F). Failure to properly clean the substrate which film will be applied onto accounts for more than 90% of application failures. Simply taking an extra moment to clean your substrate is the key to success. **DO NOT APPLY TO HOT SURFACES.**

Some cleaners will work better than others, because they won’t leave a residue and you can use them on most substrates without problems. They include:

- A. Isopropyl Alcohol
- B. Automotive grade general purpose adhesive removers (i.e. 3M, DuPont, Sherwin-Williams)
- C. Water-based adhesive removers

To get the fastest, most durable bond during application, you must clean the substrate properly. Avoid cleaning products not intended for this use. Clean first with a light mix of synthetic dish detergent and water, let dry, followed by thorough wipe down with the adhesive remover or alcohol. Another part of cleaning that can cause contamination is what you use to wipe the substrate. Use only lint free or durable kitchen-type paper towels, because they are not treated with chemicals. Industrial or commercial-type paper towels are treated for lint or static, and these towels end up transferring chemical residue to substrates. Also, cloth towels—even freshly cleaned cloth towels—may contaminate substrates with chemical residues. As the paper towels become wet, they tend to produce lint, so have adequate fresh towels at hand.

**NOTE:**

- If vinyl film application squeegee and sleeve is not available, a suitable substitute is a “Bondo” spreader or plastic credit card/drivers license wrapped in a low friction sleeve fashioned from a soft but durable paper towel. **DO NOT USE PLASTIC DIRECTLY ON FILM AS IT MAY SCRATCH FILM.**

**APPLICATION INSTRUCTIONS**

**DURABLE PAPER TOWEL**

**Dry Application Only** is quick and simple. Take a few minutes to study the layout and observe where each piece is to be placed. It is best to peel the liner paper back 1 or 2 inches at a time and adhere film as you go as opposed to removing the paper liner all at once. Position piece on area specified and align one of the edges, preferably a straight edge. You may reposition film piece a few-times. Stretch the film taunt and using your thumb, adhere the first ½” to 1” of that edge then, using your thumb/fingers or **vinyl squeegee inserted in a low friction sleeve**, squeegee the rest of the piece out from that edge an inch or two at a time in a sweeping/spreading “fan like” motion. **BE CAREFUL TO NOT ALLOW FILM TO CONTACT SURFACE AHEAD OF THIS SQUEEGEE MOTION AND KEEP FILM TAUNT ON THE SURFACE, ESPECIALLY CURVED SURFACES.** This “fan like” motion will spread out and disperse any film excesses (little “tents” or “fingers”) resulting from surface contours. It is important to continually make many little film excesses out of the large ones, being careful not to “kink” film. Once the piece is applied and smooth, cut a piece of the vacant liner, place it over the piece to protect the film (or use squeegee w/sleeve and no liner) and squeegee again firmly to set the adhesive. Repeat above procedure for each piece. This film has limitations in conforming to compound curvatures.

**NOTE:**

- If a film piece is applied and you want to move it, you must use a **film removers** to remove the film from the surface. This film can be removed by hand, but it may leave residue on the surface. DO NOT USE HEAT GUN. Any adhesive remaining on surface can be removed by careful use of automotive grade adhesive remover on OEM quality paint only.

**REMOVAL:** Ambient temperature should be 60°F or above. Surface should be at or above surrounding temperature.

- Start peeling from corner and loosen entire edge. Pull at 180° to surface rocking side to side slowly and firmly until entire piece is removed. The warmer the surface, the more pliable the film. If film starts to break, heating film outer surface with hair dryer only will soften film & application of automotive grade adhesive remover at film contact edge will soften adhesive. **DO NOT USE HEAT GUN.** Any adhesive remaining on surface can be removed by careful use of automotive grade adhesive remover on OEM quality paint only.

**NOTICE TO PURCHASER:** The manufacturer and seller of this product believe this product to be suitable and to have the necessary characteristics to serve its intended purpose based upon the technical information, testing and statements herein which we believe to be reliable, however, the completeness and accuracy thereof is not guaranteed. Manufacturer and seller make no warranties, expressed or implied warranties of merchantability for this product and fitness for any purpose. Manufacturer’s and seller’s sole obligation shall be the replacement of that portion of this product proven to be defective, provided the defective portion is returned to the seller within 30 days of purchase along with proof of purchase. Before using the product, user shall examine and determine the suitability of this product for user’s intended purpose and assumes all risk and liability whatsoever related to its use. NEITHER MANUFACTURER NOR SELLER SHALL BE LIABLE, EITHER IN CONTRACT OR TORT FOR THE USE OF, MIS-USE, OR INABILITY TO USE THE PRODUCT-THIS SHALL COVER ANY LOSS OR DAMAGE, DIRECT, INDIRECT, INCIDENTAL OR CONSEQUENTIAL RELATED TO THE USE OF THIS PRODUCT. No recommendation or statement outside of this notice shall have any effect or force except in writing signed by authorized officers or manufacturer and seller.
Description
Soft PVC film which conforms well with the substrate. Surface matt. Transparent, white and black additionally available with glossy surface.

Release paper
Silicone coated paper on one side, 135 g/m².

Adhesive
Polyacrylate, removable

Area of use
For short- and medium-term outdoor applications such as markings, inscriptions and decorations. Indoor exposure is almost unlimited.

Printing method
Screen printing is recommended. Special inks are necessary for UV-offset printing and flexoprinting.

Certificates
General Type Approval (ABG) acc. to § 22a StVZO, Federal German Road Traffic Licensing Order (~~~D5425)

Technical data

| **Thickness*** (without protective paper and adhesive) | 80 micron |
| **Dimensional stability** (FINAT TM 14) | adhered to steel, no measurable shrinkage in cross direction, in length 0.4 mm max. |
| **Temperature resistance*** | adhered to aluminium, -40°C to +80°C, no variation |
| **Water resistance** | adhered to aluminium, after 48h/23°C no variation |
| **Adhesive power*** (FINAT TM 1, after 24h, stainless steel) | 6 N/25 mm |
| **Tensile strength** (DIN EN ISO 527) | |
| along | min. 19 MPa |
| across | min. 19 MPa |
| **Elongation at break** (DIN EN ISO 527) | |
| along | min. 130% |
| across | min. 150% |
| **Shelf life*** | 2 years |
| **Application temperature** | > +10°C |
| **Service life by specialist application** | 3 years (not printed) |
| under vertical outdoor exposure (normal climate of Central Europe) | |
| **Removability** | within 2 years residueless removable from most surfaces |

Attention:
Surfaces to which the material will be applied must be thoroughly cleaned from dust, grease or any contamination which could affect the adhesion of the material. Freshly lacquered or painted surfaces should be allowed to dry for at least three weeks and to completely cure respectively. The compatibility of selected lacquers and paints should be tested by the user, prior to application of the material. Furthermore the application information published by ORAFOL is to be considered. The batch traceability according to ISO 9001 is possible on the basis of the roll number.

The statements in this information sheet are based upon our knowledge and practical experience. This data is intended only as a source of information and is given without guarantee and does not constitute a warranty. Due to the wide variety of possible uses and applications customers should independently determine the suitability of this material for their specific purpose, prior to use.
1 Preliminary remarks
The following general tips are given for application of ORAFOL® Printing Materials.
If you want to apply printing material on a car, please also see our practical information for self-adhesive films for application on cars (Download: www.orafol.de).

2 Storage
ORACAL® printing films should at all times be stored in a cool dry place protected from sunlight. Material delivered in rolls must be either suspended or stand on-end on the roll blocks provided. Products delivered in sheet form must be stored flat on shelves or on pallets in their original packing. Prior to processing, the self-adhesive films should be accommodated to the humidity and temperature conditions prevailing in the processing area. Relative humidity of between 40% and 50% and temperatures in the range of +18°C to +22°C are considered ideal. The table below provides guidelines for the time required for accommodation depending on the stacking height of the sheets and the temperature difference between the sheets and the processing area.

<table>
<thead>
<tr>
<th>Number of sheets per stack</th>
<th>Temperature difference between sheets and processing area</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>± 5°C</td>
</tr>
<tr>
<td>250</td>
<td>3 h</td>
</tr>
<tr>
<td>1500</td>
<td>4 h</td>
</tr>
</tbody>
</table>

3 Cutting
It is important to use a clean, sharp knife when cutting ORACAL® printing films. A clean knife prevents any build-up of adhesive residue which could be deposited on the edge of the sheet. The clamping balls should apply as little pressure as possible during cutting.

4 Printing
Use only printing ink systems recommended by the ink manufacturer for the self-adhesive material being processed. During multicolour printing, always ensure that each layer of ink has thoroughly dried before the next is applied.
There is a direct relationship between dimensional stability and register accuracy during printing. Tunnel drying alters the moisture content of the cover paper and the dimensional stability of the film itself may be affected. To ensure register accuracy in multicolour prints, we recommend passing the self-adhesive material once through the printing machine and the tunnel dryer prior to printing. Undulation of the edges or plating of the self-adhesive material can always be traced to excessively dry or moist conditions within the processing areas. Constant ambient conditions should be maintained both day and night. A large reduction in temperature promotes undulation of the edges. If you wish to protect the print with a finishing coat of clear enamel, please be aware that solvents may cause brittleness of the material and that shrinkage may occur during drying causing the film edges to detach from the carrier paper or from the surface to which the film is applied. Compatibility should therefore be tested prior to printing.

5 Application
ORACAL® printing grades can be applied to many surfaces but all have to be clean, dry and free of oil, grease, solvents, silicone or other contamination. Residues of solvent left after incomplete cleaning can cause gas bubbles between the film and the surface. Similarly, fresh finishes including oven-dried and baked paints can cause bubbles and should be allowed to stand for at least three weeks. To avoid undesirable temporary whitening in wet application on transparent surfaces, we recommend the use of printing films equipped with solvent polyacrylate adhesive.
For the application on cars please see additionally the practical information on how to apply self-adhesive films on cars. For the application on car windows the remarks in the practical information for application on cars are to be followed.
Caution! Certain high thermal insulation double glazing systems may be damaged by self-adhesive stickers due to stresses caused by extreme temperature fluctuations.

6 Removability
Please see the practical information for plotter films.

This information is based on our knowledge and experience. We have not explain all considering aspects of application. Specialized or occupational knowledge and competence of an professional sign maker are presupposed. Due to the diversity of potential influencing factors during application and use, we recommend to make own tests of our products by customers who wish to use the films for special applications. No legally binding warranty of certain qualities can be derived from our information.

Oranienburg, 12 October, 2010
ORAFOL® Europe GmbH
Orafolstraße 2, D-16515 Oranienburg
Tel.: +49 (0) 3301 864 0,
Fax: +49 (0) 3301 864 100
Email: Verkauf@orafol.de