

# Scotchgard™ Paint Protection Films

Application Guide for Professional Applicators

Technical Update

August 2008

Supersedes Instruction Bulletin 2-14 dated April 2004

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## General Description

This technical update outlines the recommended procedures for the installation of Scotchgard™ Paint Protection Film (PPF) from 3M. It details application techniques and materials necessary for a successful installation.

Scotchgard PPF is a durable high-grade colorless urethane film applied to high-impact areas of your vehicle that take the brunt of damaging stones and road debris. The film helps protect from stone chips, scratches, bug damage, road tar stains and automotive fluid stains, as well as punishing outdoor weathering. Automotive OEMs use this film to protect visible surfaces such as the leading edge of the hood, rocker panels, wheel flairs, door openings – and other non-visible surfaces. Scotchgard PPF offers excellent film clarity and gloss retention, with a proprietary, protective clearcoat for optimal surface protection.

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## Shelf Life, Shipping & Storage

1. One year from date of receipt.
2. Acceptable shipping and storage conditions: 40°F – 80°F (4°C-27°C) and 10-90% relative humidity.
3. Recommended storage conditions for optimum shelf life: 72°F (22°C) and 50% relative humidity.

When storing a pre-cut 3M™ Digital Design Pattern Kit:

1. Reverse roll the kit, so the liner shows the 3M logo on the outside of the rolled kit.
2. The reverse rolled kit should be no smaller than 2 ¾" inches in diameter and should fit in a 3" tube.
3. Winding the kit any tighter than 2 ¾" inches or winding it with the film side out can affect the film stability.

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## Equipment

### Application Tools

### 3M Part Number

Orange Urethane Squeegee

71607

Yellow Turbo Squeegee

Available on [www.3m.com/dealermarketing](http://www.3m.com/dealermarketing)

3M™ Perfect-It Detail Cloth

06020

3M™ General Purpose Adhesive Cleaner (GPAC)

08984

3M™ Glass Cleaner

08888

3M™ Performance Finish

39030

Spray Bottles (2 each – 16 oz.)

70% Isopropyl (Rubbing) Alcohol\*

Johnson's® Baby Shampoo

Source of Clean Tap Water

These products are available on the 3M e-store – [www.3Mestore.com](http://www.3Mestore.com) If these products are not available, RapidTac (a non-3M product) adhesive remover works well.

\*Note: When using solvents, extinguish all ignition sources, including pilot lights and follow the manufacturer's precautions and directions for use.

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### Products

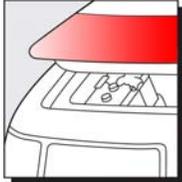
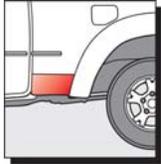
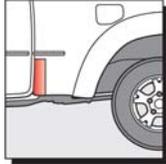
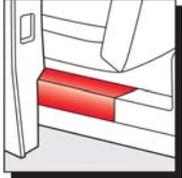
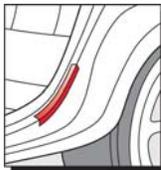
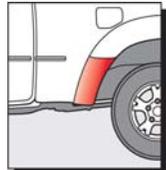
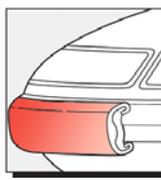
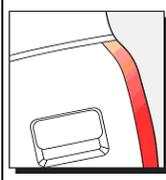
#### Scotchgard™ Paint Protection Films SGH6 and SGH12

Protective Clearcoat	Thickness of Base Film	Thickness with Adhesive
SGH6	0.152 mm 6 mil	0.203 mm 8 mil
SGH12	0.305 mm 12 mil	0.356 mm 14 mil

### Film Part Numbers and Sizes

Part Number	Scotchgard™ Paint Protection Film
84701	1 inch x 12.5 yards / 12 mil
84706	6 inches x 20 yards / 12 mil
84712	12 inches x 20 yards / 12 mil
84718	18 inches x 20 yards / 12 mil
84724	24 inches x 20 yards / 12 mil
84748	48 inches x 20 yards / 12 mil
84802	2 inches x 40 yards / 6 mil
84804	4 inches x 40 yards / 6 mil
84806	6 inches x 40 yards / 6 mil
84812	12 inches x 40 yards / 6 mil
84818	18 inches x 40 yards / 6 mil
84824	24 inches x 40 yards / 6 mil
84830	30 inches x 40 yards / 6 mil
84836	36 inches x 40 yards / 6 mil
84848	48 inches x 40 yards / 6 mil
84905	0.4 inches x 40 yards / 6 mil

### Target Applications

Protect Painted Body Panels and Exterior Components		
To protect paint from stone chips, scratches, bug damage, road tar stains, fluid stains and outdoor weathering.		
Hood Leading Edge 	Rocker Panel 	Bed Leading Edge 
Door Sill 	Door Opening 	Wheel Flare 
Door Handle 	Bumper 	Door Edge 

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**Application Conditions** The recommended vehicle surface temperature and ambient air temperature are both between 55°F and 90°F (13°C – 32°C). Vehicle should be removed from direct sunlight. Winds should be below 5 mph.

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**Surface Preparation** For best results, wash hands thoroughly before application to avoid film contamination, such as fingerprints, which are difficult to remove.

On repainted vehicles, paint must be thoroughly dry and completely cured before any attempt to apply film to the vehicle is made, in order to avoid film bubbling due to paint out gassing. Check paint manufacturer's instructions for recommended cure time and method.

Clean all surfaces prior to Scotchgard PPF application. Recommended cleaners include: 3M™ General Purpose Adhesive Cleaner (GPAC) (3M Part #08984 or #08987), which contains specially blended solvents\* for removal of adhesive residue, wax, grease, tree sap, road tar, oil and bugs.

**It is imperative to follow the adhesive cleaner with a glass cleaner**, such as 3M™ Glass Cleaner (3M Part #08888) because it removes all of the adhesive cleaner residual solvents. Failure to follow this step could result in insufficient Scotchgard PPF adhesion.

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**Scotchgard PPF Application**

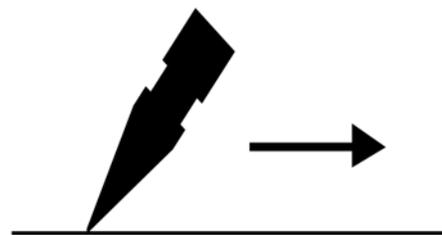
1. 3M recommends using a two-solution application method for optimal appearance and results.
  - Soap Solution – Fill a 16 oz. spray bottle with water and add .6ml (4 drops) of Johnson's Baby Shampoo or Aveeno Baby Wash and Shampoo.
  - Alcohol Solution – Fill a 16 oz. spray bottle 75% full of water and add 25% Isopropyl Alcohol (70% rubbing alcohol)\*.

Wash your hands before starting the application, to avoid fingerprints on the adhesive.

The top surface of the film should be wet with the Soap Solution throughout the application to allow the squeegee to slide across the film.

**There are two different squeegee strokes that are used when applying Scotchgard PPF.**

The “**Pull**” squeegee stroke is the most common squeegee method to apply Scotchgard PPF and can be used for the majority of the application. This pull squeegee stroke is used to remove the majority of the solution from between the film adhesive and the painted surface.



\* Note: When using solvents, extinguish all ignition sources, including pilot lights and follow the manufacturer's precautions and directions for use.

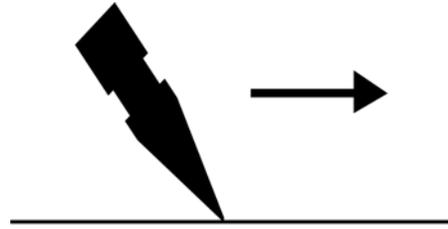
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### Scotchgard PPF Application Continued...

The “**Pushing**” squeegee stroke is sometimes referred to as “knifing the squeegee.” This stroke is used when additional direct force is required. The pushing squeegee stroke is most often used to compress film fingers and remove bubbles. Other locations that could benefit from the pushing stroke are concave and confined areas, as well as edges.



**Note:** Overlap squeegee strokes to ensure no solution is left between the film adhesive and the painted surface.

2. Using the Soap Solution, spray your fingers, the application area on the vehicle and the adhesive side of the film. The Soap Solution allows you to slide the film into its desired position.
3. For correct placement, alignment and stretching requirements refer to the application instructions supplied by the pattern provider.
4. Properly position the film. If stretching is not required, squeegee out the Soap Solution. Dry the surface with a soft, clean cloth, such as a 3M™ Perfect-It™ III Detailing Cloth and look for bubbles.
5. Continually re-wet your fingers, film and vehicle with the Soap Solution throughout the application process.

**Note:** During the application, bubbles can be removed by making firm, quick squeegee “pushing strokes” toward the nearest edge that has not been tacked down.

6. If the film part requires stretching into place, Alcohol Solution will be needed. The most common method is the “Center Tack Method” of installation. Slightly lift the film and spray the center of the adhesive side with the Alcohol Solution.\* Properly position the film and squeegee the center to lock in place.

**Note:** The Alcohol Solution washes away the soap and softens the adhesive to allow an instant bond.

**Note:** For best results, work with one half of the film at a time. Position and secure the first half of the film and then move to the other half.

**Note:** Keep the adhesive wet during application to facilitate repositioning.

7. When film requires stretching use the “**Palm Stretching**” Method.

\*Note: When using solvents, extinguish all ignition sources, including pilot lights and follow the manufacturer’s precautions and directions for use.

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### SCOTCHGARD PPF Application Continued...

#### “Palm stretching” method:

- a. Dry the surface of the film where you will be applying pressure with your palm.
  - b. Using your dry palm, stretch the film to line up with the next tact point.
  - c. Squeegee the film to lock the stretch into place.
  - d. Repeat as necessary.
8. Re-wet the film again with the Soap Solution.
  9. To remove remaining solution beneath the film, squeegee from the center point of the application and slide toward the edges of the film.
  10. If film fingers have formed (linear film pockets, formed at the edge of the film that have not adhered to the painted surface after initial squeegeeing), spray inside the fingers with Alcohol Solution and re-squeegee. This motion pushes out any remaining solutions.
  11. Wipe the film with a 3M™ Perfect-It™ III Detailing Cloth to get a clear look at the application. Other types of cloths may scratch the surface of the film. There may still be some water pockets or air bubbles remaining. Re-wet the surface and your fingers with the Soap Solution and re-squeegee.
  12. If you cannot get the air pockets or bubbles out, the film can be lifted and re-applied within five minutes of application completion. Be sure to re-wet the film, the vehicle and your fingers before you lift the portion of the film that has bubbles. Use the same squeegee technique, starting at the center point of the application and sliding the squeegee to the edges of the film.
  13. Repeat this procedure on the second half of the film.

**Note:** Learn proper installation procedures by becoming a Scotchgard™ Certified Installer. Go to the Scotchgard™ Paint Protection Film website for more information. (<http://www.3m.com/paintprotectionfilm>)

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### Maintenance

Do **NOT** wash vehicle for 24 hours. Film may then be washed and waxed normally with vehicle. Avoid spraying the edges of the film with a pressure washer or a hose to reduce the chance of lifting the edges of the film. 3M recommends waxing the vehicle and film with 3M™ Performance Finish after installation. Do **NOT** use pigmented or abrasive waxes and polishes or similar products on the film. Wax build-up along the film edges may be removed with a 3M™ Perfect-It Detail Cloth, a soft brush or a Q-tip® Cotton Swab.

**Do NOT pressure** wash your car for **24 hours**.

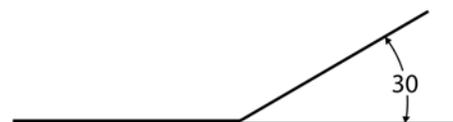
**Never** use pigmented waxes.

**Never** use paste waxes.

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### Scotchgard PPF Removal

The film can be removed at any time, if desired. Lift a corner of the film and remove with a pulling action using a 30° to 90° degree angle.



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### Scotchgard PPF Removal Continued...

If the film is difficult to remove due to age or cold temperatures, then a steamer can be used. 3M recommends a wallpaper or clothes steamer, which is available in stores nationwide. Steam softens the film and makes it easier to remove. Using the steam removal method, the adhesive stays on the film during removal, requiring less adhesive clean-up.

A heat gun or hair dryer can also be used to soften the adhesive. This method may cause the adhesive to split which will require more adhesive to be cleaned off the vehicle.

If any adhesive remains on the vehicle after removal of the film, it can be removed by using 3M™ General Purpose Adhesive Cleaner (3M Part #08984 or #08987), 3M™ Woodgrain and Stripe Adhesive Remover (3M Part #08908) according to the package directions or 3M™ Natural/Citrus Cleaner. These products are available on the 3M e-store – [www.3Mestore.com](http://www.3Mestore.com). If these products are not available, RapidTac (a non-3M product) adhesive remover works well.

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**\*\*Important Note:** Some state Volatile Organic Compound (VOC) regulations may prohibit the use of this alcohol/water solution. For example, the California South Coast Air Quality Management District (AQMD) prohibits use of this solution without a permit, and other California AQMDs prohibit use of the solution without a permit or a regulatory exemption. You should check with your state environmental authorities to determine whether use of this solution is restricted or prohibited.

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# Scotchgard™ Paint Protection Film

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**Note:** All statements, technical information and recommendations herein are based on tests 3M believes are reliable. 3M does not warrant or guarantee the accuracy or completeness of this information.

Limited Warranty and Limited Remedy:

**What is covered?** 3M warrants that applied Scotchgard Paint Protection Film will be free of defects in materials and manufacture – including yellowing, bubbling, or cracking -- for five (5) years from date of purchase. This warranty does not apply to damage caused by misuse, accident, misapplication, or ordinary wear, nor does it apply to dents caused by physical impact of rocks or road debris. The warranty is provided only to the original purchaser and is not transferable. If there is a breach of this warranty, then 3M will have an installer remove the old film and apply new Scotchgard Paint Protection Film.

**Applicator Warranties.** Some installers may choose to offer, on their own behalf, different or additional warranties or remedies, beyond the limited warranty and limited remedy offered by 3M. The installer is responsible for the costs of any different or additional warranties or remedies beyond those described herein. This warranty does not apply to headlight and uncleared film.

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**3M**  
Automotive Aftermarket Division  
3M Center, Building 223-6N-01  
St. Paul, MN 55144-1000  
[www.3M.com/PaintProtectionFilm](http://www.3M.com/PaintProtectionFilm)

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