

# 3M™ Exterior Trim Film FPS6503J

## For Roll Forming Processes

### Technical Data Sheet



#### General Description

3M™ Exterior Trim Film FPS6503J is a high gloss black polyurethane film designed for heat bonding to stainless steel via roll-forming. The functional polyurethane film layer has excellent resistance to mechanical abrasion and chemical attack as well as to prolonged exposure to accelerated weathering. 3M Exterior Trim Film FPS6503J meets OEM design requirements for decorative accents on exterior trim components. The film can be used on the show surface of stainless steel used in exterior automotive components and closures.

This exterior trim film features a high gloss black polyurethane film layer with a heat-activated adhesive designed to bond to stainless steel using a roll forming process. A primer is required when using this process to ensure a robust bond between the film and the part.

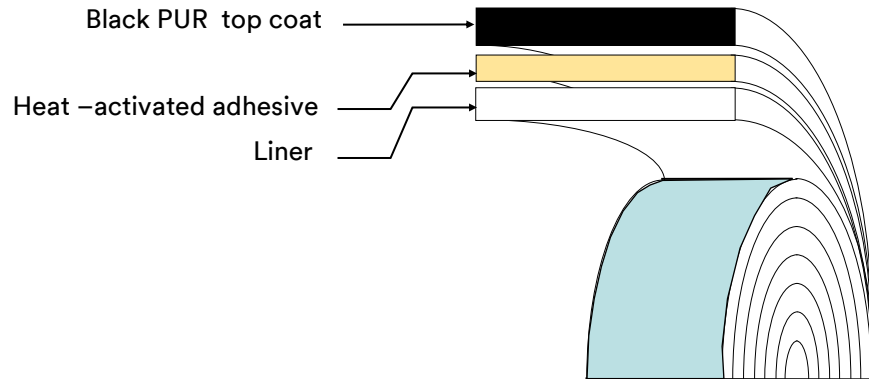
3M Exterior Trim Film FPS6503J features include:

- Effective design tool for brand differentiation and visual impact
- Allows for matching the finish on parts made from varying substrates
- Holds up to prolonged exterior weathering and tough automotive environments

#### Applications:

Belt Line Moldings  
Door Sash Molding  
Roof Top Moldings

## Product Construction



## Physical Properties

| Characteristics                            |                        |             |
|--|------------------------|-------------|
| Color                                      | Black                  |             |
| Surface Appearance                         | High gloss - 90° gloss |             |
| Film Composition                           | Thickness              | Color       |
| Polyurethane top coat                      | 50µm                   | Black       |
| Heat-activated polyurethane adhesive layer | 20µm                   | Transparent |
| Nominal Overall Caliper                    | 130µm                  |             |

## Performance Properties of Exterior Trim Film FPS6503J

| Heat Shrinkage                                  | Results              |
|---|----------------------|
| Room Temperature                                | < 1%                 |
| Heat Aged                                       | < 1%                 |
| Adhesion  | Results              |
| Cross Cut & Tape Snap                           | 25/25                |
| Adhesion  | Results              |
| Normal  | 42 N (Film Break)    |
| Heat Resistance                                 | 56 N (Film Break)    |
| Moisture Resistance                             | 39 N (Film Break)    |
| Cycle Resistance                                | 54 N (Film Break)    |
| Appearance                                      | Results              |
| Heat Resistance                                 | No Noticeable Change |
| Moisture Resistance                             | No Noticeable Change |
| Cycle Resistance                                | No Noticeable Change |
| Chemical Resistance                             | Appearance           |
| Gasoline  | No Noticeable Change |
| Acid  | No Noticeable Change |
| Engine Oil                                      | No Noticeable Change |
| Windshield Washer Fluid                         | No Noticeable Change |
| Detergent                                       | No Noticeable Change |
| Wax   | No Noticeable Change |
| Accelerated Weathering (Sunshine Weatherometer) | Results              |
| 1000H   | No Noticeable Change |
| 2000H   | No Noticeable Change |
| Natural Weathering                              | Results              |
| 1 Year – Arizona and Florida                    | No Noticeable Change |
| 2 Years – Arizona and Florida                   | No Noticeable Change |

\*Values presented have been determined by standard test methods and are average values not meant to be used for specification purposes.

### Shelf Life

12 months from date of manufacture when stored in original packaging at  $22 \pm 4$  °C and < 60 % RH.

**Technical Information:** The technical information, guidance, and other statements contained in this document or otherwise provided by 3M are based upon records, tests, or experience that 3M believes to be reliable, but the accuracy, completeness, and representative nature of such information is not guaranteed. Such information is intended for people with knowledge and technical skills sufficient to assess and apply their own informed judgment to the information. No license under any 3M or third party intellectual property rights is granted or implied with this information.

**Product Selection and Use:** Many factors beyond 3M's control and uniquely within user's knowledge and control can affect the use and performance of a 3M product in a particular application. As a result, customer is solely responsible for evaluating the product and determining whether it is appropriate and suitable for customer's application, including conducting a workplace hazard assessment and reviewing all applicable regulations and standards (e.g., OSHA, ANSI, etc.). Failure to properly evaluate, select, and use a 3M product and appropriate safety products, or to meet all applicable safety regulations, may result in injury, sickness, death, and/or harm to property.

**Warranty, Limited Remedy, and Disclaimer:** Unless a different warranty is specifically stated on the applicable 3M product packaging or product literature (in which case such warranty governs), 3M warrants that each 3M product meets the applicable 3M product specification at the time 3M ships the product. 3M MAKES NO OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OR CONDITION OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ARISING OUT OF A COURSE OF DEALING, CUSTOM, OR USAGE OF TRADE. If a 3M product does not conform to this warranty, then the sole and exclusive remedy is, at 3M's option, replacement of the 3M product or refund of the purchase price.

**Limitation of Liability:** Except for the limited remedy stated above, and except to the extent prohibited by law, 3M will not be liable for any loss or damage arising from or related to the 3M product, whether direct, indirect, special, incidental, or consequential (including, but not limited to, lost profits or business opportunity), regardless of the legal or equitable theory asserted, including, but not limited to, warranty, contract, negligence, or strict liability.



### Automotive and Aerospace Solutions Division

3M Center  
St. Paul, MN 55144-1000  
Phone 1-800-328-1684

Web [www.3M.com/autosolutions](http://www.3M.com/autosolutions)

3M is a trademark of 3M Company  
Please recycle. Printed in USA.  
© 3M 2017 All rights reserved.