

# 3M™ Exterior Trim Film FPO8501JH

## For Co-extrusion Processes

### Technical Data Sheet



#### General Description

3M™ Exterior Trim Film FPO8501JH is a polyurethane film with a high gloss black appearance designed for heat bonding to TPO via co-extrusion. The functional urethane film layer has excellent resistance to mechanical abrasion and chemical attack as well as to prolonged exposure to accelerated weathering. 3M Exterior Trim Film FPO8501JH meets OEM design requirements for decorative accents on exterior trim components. The product is intended to be supplied as a roll good and applied using a co-extrusion process to dramatically change the appearance of exterior trim plastic pieces such as window seals, belt line and roof ditch moldings.

This exterior trim film features a high gloss black polyurethane film layer with a PE/PP co-polymer capable of heat bonding to compatible resins such as TPO in cost effective co-extrusion processes, with or without metal reinforcing profiles. The transparent polyester carrier prevents elongation of the film construction at extrusion temperatures in excess of 200°C, and also serves to protect the surface of the high gloss polyurethane film layer during the co-extrusion process. After finishing, the polyester carrier is designed to be easily removed to reveal a high gloss black finish.

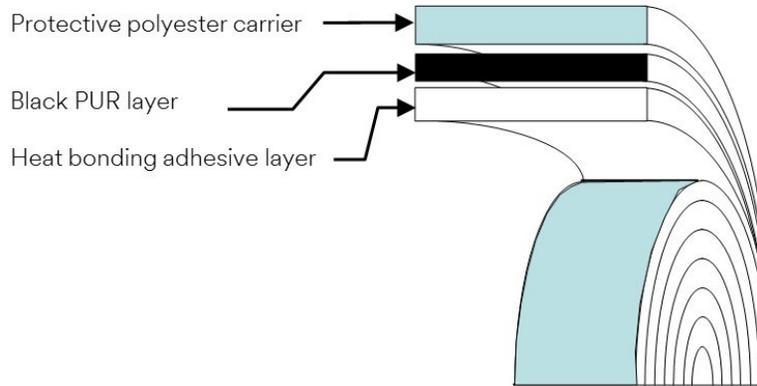
3M Exterior Trim Film FPO8501JH features include:

- 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
- Transparent polyester carrier protects the surface of the high gloss polyurethane film layer during transportation

#### Applications

Belt Line Moldings  
Door Sash Molding  
Daylight Openings (DLO)  
Roof Top Moldings

## Product Construction



## Physical Properties

Characteristics		
Color	Black	
Surface Appearance	High gloss - 90° gloss	
Film Composition	Thickness	Color
Protective polyester carrier	50µm	Transparent PET (removable and recyclable)
Polyurethane film layer	50µm	Black Polyurethane
Heat-activated PP adhesive layer	100µm	Transparent ABS Polymer
<b>Nominal Overall Caliper</b>	<b>200µm</b>	

## Performance Properties of Exterior Trim Film FPO8501JH heat bonded to TPO

Mechanical & Chemical resistance	Test method & requirement	Result
Chemical resistance: (FAM test fuel (DIN 51604 -1B), Gasoline E10, Diesel, Iso-propanol, Sodium Hydroxide, Sulfuric Acid, Hydrochloric Acid, H2O, Tree resin, Bird droppings, Car Wash Detergent, Wax and dewax)	DIN EN ISO 2812-4, drop method A, 10 min at room temp <ul style="list-style-type: none"><li>no changes</li></ul>	Pass
Car wash / scratch resistance	ISO 20566:2013 <ul style="list-style-type: none"><li>no changes</li></ul>	Pass
Scratch resistance - Erichsen model 318	> 7N load <ul style="list-style-type: none"><li>no visible marking</li></ul>	Pass
Adhesion & Appearance after ageing	Test method & requirement	Result
Humidity condensation atmosphere (240h at 40°C - 100% RH)	DIN EN ISO 6270-2 <ul style="list-style-type: none"><li>no changes</li></ul>	Pass
Salt spray – 600 hours	DIN EN ISO 9227 <ul style="list-style-type: none"><li>no changes</li></ul>	Pass
High Pressure Cleaning	DIN 55662: Static method with cross cutting <ul style="list-style-type: none"><li>no surface damage</li><li>no adhesion loss</li></ul>	Pass Pass
Kalahari Xenon Test: 2 years (Non-Metallic Materials; Weathering in Dry, Hot Climate)	Kalahari / Florida Simulation <ul style="list-style-type: none"><li>gloss loss max. 15%</li></ul>	Pass/Pass
Florida Xenon Test: 2 years (Non-Metallic Materials; Weathering in Moist, Hot Climate)	<ul style="list-style-type: none"><li>minimal change in E allowed</li></ul>	Pass/Pass

\*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.

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