



3M™ Paint Protection Film PU8591US and PU8592US

Technical Data Sheet



3M™ Paint Protection Film PU8591US and PU8592US are excellent alternatives to molded protectors which can detract from finished vehicle appearance. The materials have been rigorously tested for gravel chip resistance as well as cracking, chalking and dulling due to natural weathering. The films have excellent clarity and gloss retention, and show excellent tensile strength and resistance to elongation or shrinkage. The films do not have a clear coat, making them especially suitable for use in non-visible areas such as for metal separators, hose wraps and as a body hole filler.

The tough, durable, virtually invisible urethane films will keep vehicles looking newer longer, without changing the design features or color. The films create a barrier and protect vulnerable surface areas such as front bumpers, side mirrors, door handle cavities, door edges, rocker panels and rear fender panels.

3M Paint Protection Film PU8591US and PU8592US features include:

- Nearly invisible protection against scratches, part wear and corrosion
- No clear coat – ideal for protecting non-visible surfaces
- Pressure-sensitive adhesive makes for fast, efficient application without curing
- Flexible, die-cuttable film makes application to complex automotive surfaces easier
- Die-cut, pre-masked parts and simple dispensing tools help reduce production costs
- Polyurethane film base resists chipping, scratching, staining and yellowing
- Developed specifically for protecting automotive surfaces from scratches, galvanic corrosion, abrasion and wear

Applications



Rocker Panel



Bed Leading Edge



Hood Leading Edge



Fender



Wheel Edge



Door Handle

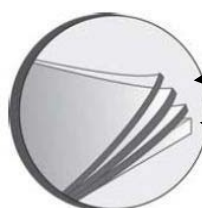


Rear Quarter Panel



Trunk Ledge

Product Construction



- Polyurethane Film
- Acrylic Pressure Sensitive Adhesive
- Paper Liner

Physical Properties

	PU8591US	PU8592US
Color	Transparent	Transparent
Thickness without Adhesive	0.305 mm (12 mils)	0.152 mm (6 mils)
Overall Thickness	0.356 mm (14 mils)	0.203 mm (8 mils)

Product Characteristics

Characteristics	Results
Shrinkage	< 0.1%
Tensile	30 MPa (4350 psi)
Elongation	> 400 %

Performance Properties

Performance tests are run using standard test procedures in 3M laboratories. These values presented are typical and not to be used for specification purposes.

Test Description	Results
180° Peel Adhesion (Aluminum)	
20 minutes at room temperature	600 N/m (3.4 lb/in)
72 hours at room temperature	700 N/m (4.0 lb/in)
168 hours at 70°C/158°F	700 N/m (4.0 lb/in)
168 hours at 35°C/95°F & 100%RH	700 N/m (4.0 lb/in)
Thermal Cycle	700 N/m (4.0 lb/in)
Stain Resistance	
Unleaded gasoline; Diesel fuel; Motor oil	Moderate discoloration
Gravelometer	
SAE J400 - 2 cups of gravel at 25°C/77°F	Pass – no paint chipping
Natural Weathering	
24 months at 45° south-facing Arizona exposure; 24 months at 5° south-facing Florida exposure	Slight discoloration - No cracking, chalking, or dulling

Availability

3M™ Paint Protection Films are available direct from 3M or 3M-approved converters. Contact your 3M Automotive Division account representative for roll sizes, minimum order quantities, prices, and terms and conditions of sale.

Application Conditions

Recommended temperature range of 24 ± 6°C for part, vehicle body, and ambient conditions. Heat or cool as needed to maintain required temperature range. Clean application area is required.

Shelf Life

One year from date of receipt by customer when stored in original packaging at 22 ± 4°C and at a maximum moisture of 60% RH.

Regulatory Information

Please refer to the product label and Article Information Sheet (AIS) for health and safety information before using.

Contact Information

The information provided in this technical document is intended as a guide for these products. For more information or help in selecting a 3M product for an application, please contact your 3M technical service representative or call 1-800-328-1684.

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