Automotive
Technical Datasheet

3M

3M™ High Performance Protective Film PUL2006

MARIAN
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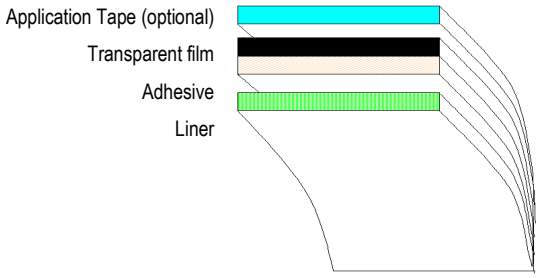
General Description:

3M™ High Performance Protective films are specially designed to protect painted automobile surfaces, improving functionality and allowing the conservation of visual appearance for long periods. 3M™ High Performance Protective films allow customized adjustment to application needs regarding improved chemical and mechanical resistance (like stone chip), long-term durability against environmental exposure and conformability to complex shapes and wrap-arounds.

Construction:



Special Characteristics:

PUL 2006 is a high performance protective film, which can be used for a wide range of exterior automotive applications. A characteristic feature of this film is its high transparency and the high gloss provided by its high performance surface treatment. Its excellent functionality is needed for protection of many automobile specific applications e.g. glass sunroofs, surfaces between the car body and the bumper, painted surfaces at door edges and around door handles as well as for wheel arch areas. PUL 2006 is well resistant against abrasion and scratching even under high temperature influences. Furthermore this film performs well under conditions of medium gravel impact, helps to reduce noise, provides resistance to splintering at low temperatures and has an excellent weathering performance. The adhesive has been designed to provide reliable permanent adhesion under all common environmental loads.

General Properties:

Color	Highly transparent
Application tape (optional)	Pressure sensitive adhesive coated paper to enable an easy, dimensionally stable application of the paint protective film. PUL 2006 rolls have a transparent protection liner instead of the application tape.
Film	especially developed PUR resin combined with an additional functional layer
Adhesive	Acrylate adhesive with very high bond strength developed for automotive paints surfaces
Liner	paper liner for easy removal
Shelf life	12 months from date of receipt by customer when stored in original cartons at 22 ± 4℃ and at max. 60% relative humidity

Physical Properties: (Typical Values)

Criteria	Results	Test method
Nominal thickness (film and adhesive)	210 µm	n.a.
Nominal Weight (film + adhesive)	230g/m²	n.a.
Tensile strength and elongation	3864 N/cm², 281 %	3M LS005/6
Dimensional stability (Shrinkage) 30min. 120°C	< 0,5 %	3M LS026

Performance Properties: (Typical Values)

180° Peel adhesion (Aluminum)	Results	Test Method
30 Min. at SLC (N/cm)	12,450	3M LS 007
72 h. at SLC (N/cm)	15,245	3M LS 007
7 days at 80 °C (N/cm)	15,989	3M LS 008
7 days 38 °C, 98 % moisture (N/cm)	16,511	3M LS 010
Thermal Cycling (N/cm)	16,081	3M LS 009
Surface Appearance	**Results**	**Test Method**
7 d at 80 °C	No changes	3M LS 019
30 min. 120 °C	No changes	3M LS 019
7 d at 38 °C, 98 % moisture	No changes	3M LS 019
Thermal Cycling (N/cm)		
Resistance to Wax and Dewax	No changes	3M LS 024
Resistance to Fluids (Crockmeter 10 cycles) Isopropanol/ Water 1:1 0,01% Dishwasher solution Commercial paint cleaner	 No changes No changes No changes	3M LS 023
Resistance to Diesel (rub test, Crockmeter, 6 Cycles)	Corresponds	3M LS 015
Resistance Diesel and Unleaded super fuel (Immersion test)	Corresponds	3M LS 015
Low Temperature Gravel Resistance (SAEJ400, -30°C, 70psi, 500ml gravel)	Corresponds	SAEJ400
Accelerated weathering 4000 h (Atlas Xenon CI 4000)	Corresponds	DIN EN ISO 4892-2(11/2009)

Additional Information

This data sheet contains specific information about the product. General characteristics and application rules of high performance protective films are available separately.

Important notice to purchaser

All statements, technical information and recommendations herein are based on tests we believe to reliable, but the accuracy or completeness thereof is not guaranteed. Please ensure before using our product that it is suitable for your intended use. All questions of liability relating to this product are governed by the Terms of Sale subject, where applicable, to the prevailing law.

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