PNUE 9006 E

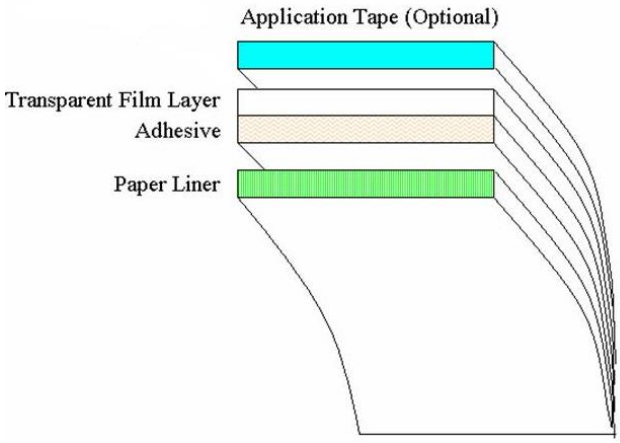
3M™ High Performance Protective Film

Technical Data Sheet

General Description

3M™ high performance protective film portfolio is specially designed to protect painted automobile surfaces, improving functionality and allowing the conservation of visual appearance for long periods. The range of protective films allows 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.

General Construction



Special Characteristics

PNUE 9006 E is a high performance protective film which can be used in a wide range of exterior applications where surface protection against chemical and mechanical attack is needed like between bumper and car body, etc.
The film is characterized by medium thickness and a transparent surface. It is resistant against scratching, high temperatures and chemical stress and has an excellent weathering performance. The adhesive provides a reliable bond under environmental stress like changing temperatures or moisture and in particular by the application to new paint generation systems.

General Properties

Colour	transparent
Application Tape	paper tape for easy recycling
Film	polyolefin base
Adhesive	high and reliable bond to a wide variety of automotive surfaces under all environmental conditions
Liner	paper liner for easy recycling
Shelf Life	1 year from date of receipt by customer when stored in original packaging at 22 ± 4 °C and at maximum moisture of 60 %

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Physical Properties

(Typical Values)

Characteristics	Results	Test Method
Nominal Thickness (film+adhesive)	310 µm	3M LS 034
Nominal weight (film + adhesive)	285 g/m²	3M LS 041
Tensile Strength, Elongation	2702 N/cm², 548%	3M LS 005,006
Dimensional Stability (Shrinkage) after 7d 80 °C, 30 min. 120 °C	Down web /cross web < 0,1 % / < 0,1 %	3M LS 026

Performance Properties

(Typical Values)

180° Peel Adhesion (Aluminium)	Results	Test Method
20 min. at SLC	11,2 N/cm	3M LS 007
7 d at 80 °C	17,4 N/cm	3M LS 008
10 d at 38 °C, 98 % HH	23,2 N/cm	3M LS 010
Thermal Cycling *)	14,03 N/cm	3M LS 009
Surface Appearance	**Results**	**Test Method**
7 d at 80 °C	no changes	3M LS 019
10 d at 38 °C, 98 % HH	no changes	3M LS 019
Thermal Cycling *)	no changes	3M LS 019
Resistance to Wax and Dewax	no changes	3M LS 024
Resistance to Fluids (10 rub cycles) - Isopropanol/ water 1:1 - 0,01% Dishwasher solution - Paint cleaner (commercial)	 corresponds corresponds corresponds	 3M LS 023 3M LS 023 3M LS 023
Gasoline Resistance (dip test / 6 rub cycles) - Unleaded Super Fuel - Diesel Fuel	 no changes / no changes no changes / no changes	 3M LS 015 3M LS 015
Abrasion Resistance (Crockmeter, dry, 200 cycles)	corresponds	3M LS 028
High Pressure Cleaning	corresponds	3M TMAE 002

*) Thermal Cycling: 3 times 24hrs 80 °C, 24hrs 40 °C / 98% HH, 24hrs -40 °C

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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