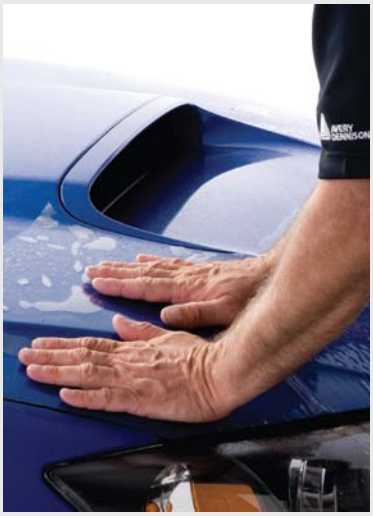


Nano-Fusion Protection™ Avery Dennison Paint Protection Film

Nano-Fusion Protection™ from Avery Dennison is a patent pending film technology that makes existing topcoats obsolete.

A topcoat is a layer of generally stiffer material laminated to a flexible urethane film base. Current topcoats make PPFs more difficult to install and weather poorly over time. There can be separation at the boundary, causing crazing and stress cracking, which affects the appearance.

Nano-Fusion Technology infuses the urethane film with clear penetrating protection. Nano-Fusion PPF is more conformable, easier to install, retains its gloss, and resists yellowing and cracking better than other films on the market.

APPLICATIONS

Automotive paint surface protection against harsh, environmental elements and everyday wear such as: Stones, bug acid, winter salt, sand, minor impact, road debris, scratches and more.

Areas to protect are:

- Bumper
- Front Fascia
- Hood
- Wheel Well
- Side Mirrors
- Roof
- Door Edge
- Quarter Panel

FEATURES

Conformable —easier to work onto the contours of the vehicle's surface

Flexible —compresses and expands easily for smooth finishing on any install

Positionable —can be re-positioned readily and as often as needed for the best fit

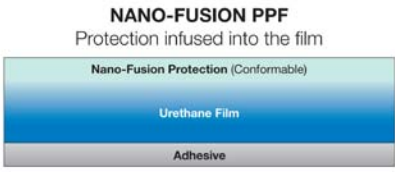
BENEFITS

Protect —your investment and vehicles finish

Decrease —paint wear

Prevent —paint chipping, nicks and scratching

AVERY DENNISON ADVANTAGE



Nano-Fusion Protection™ Paint Protection Film

TEST PERFORMED	REQUIREMENTS	6.0 MIL NANO-FUSION™
Tensile Elongation	Tensile 40 N/cm (min), % Elongation 250% (min)	Pass, 105 N/cm; 338 %
Initial Adhesion	Initial adhesive strength after 1 hr @ RT. 5.0 N/cm (min)	Pass, 7.8 N/ cm
Normal State Adhesion	Adhesive strength in normal state after 168 hr @ RT. 7.0 N/cm (min)	Pass, 9.6 N/ cm
Cold Temperature Adhesion	Adhesive strength at low temperature in normal state @ 5C. 7.0 N/cm (min)	Pass, 8.1 N/ cm
After Heat Age Adhesion	Adhesive strength after 400 hr @ 80C. 7.0 N/cm (min)	Pass, 11.1 N/ cm
After Water Immersion Adhesion	Adhesive strength.400 hr immersion in water @ 40C. 7.0 N/cm (min)	Pass, 9.7 N/ cm
After Accelerated Weathering Adhesion	Adhesive strength after 1000 hr Xenon Arc Weather-o-meter. 7.0 N/cm (min)	Pass, 13.7 N/cm
Adhered State Shrinkage	Applied to painted metal panel. 48 hr @ 80C. Max shrinkage 0.2 %	Pass, shrinkage < 0.2 %
High Pressure Washing Resistance	Water temp @ 50C, Water press @ tip 7.0 MPa Distance : nozzle tip to specimen 30 cm, Angle: nozzle tip to specimen 45 degree, time 30 sec. Grade 4 (min)	Pass. No noticeable defects. Grade 5
Heat Age	16 days @ 80C. 24 hr post exposure conditioning at RT. Grade 4 (min)	Pass, no noticeable defects. Grade 5
Thermal Cycle Test	3 cycles of the following: 7.5 hr @ -30C, 0.5 hr @ RT, 15.5 hr @ 80C, 0.5 hr @ RT, 7.5 hr @ -30C, 0.5 hr @ RT, 15.5 hr @ 50C/ 95% RH, 0.5 hr RT. 24 hr post exposure conditioning at RT . Grade 4 (min)	Pass, no noticeable defects. Grade 5
Water Immersion	400 hr immersion in water @ 40C. 1 hr post exposure conditioning at RT. Grade 4 (min)	Pass, no noticeable defects. Grade 5
Post Xenon Weathering	1000 hr (41 days) Xenon arc exposure followed by 24 hr post exposure conditioning at RT. Grade 4 (min	Pass, slight loss of gloss, no loss of adhesion, cracking, or any other detrimental effect. Grade 4
Outdoor Exposure	ASTM G7, Florida 'open rack' exposure	Preliminary Pass, after 9 months slight loss of gloss and minor color change. Grade 4
Accelerated Outdoor Weathering	ASTMG90, Accelerated 2 year Florida outdoor (Natural sun light concentrator w/ spray cycle) in Buckeye, AZ	Pass, slight loss of gloss and minor color change. Grade 4

Post Environment Evaluation Ratings:
Grade 5 = No abnormalities, **Grade 4** = Not remarkable, **Grade 3** = Slight but not obvious, **Grade 2** = Relatively extensive, **Grade 1** = Extensive

AVERY DENNISON®

ADV# 0003, 2/10
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