

...XPEL Headlight Protection Film

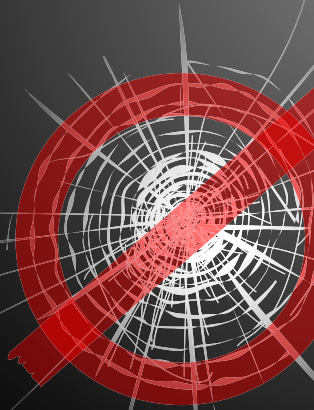
Why Protect Your Headlights?

For over 20 years, auto manufacturers have been producing cars with composite headlamp units made from either polycarbonate or acrylic materials. While these elements are great for the design aspect, they have earned the reputation for being less durable than glass and having a tendency to deteriorate over time.



Polycarbonate lenses can become cloudy and discolored due to oxidation caused by harmful UV rays. While sanding or polishing the surface can buy you a small amount of time, this process actually removes the painted-on hard coat, essentially accelerating the wear and tear. In the more advanced stages, the deterioration continues into the actual plastic material of the headlight, rendering it unsalvageable and requiring total replacement.

Probably the most common issue seen with composite headlamps is the sandblasting caused by rocks, road salt, debris and sand. This pitting and cracking not only affects the appearance, but it also reduces the performance of your lights. In some extreme cases, more commonly seen with fog lights mounted near to the ground, this can actually cause the lights to crack, allowing moisture to form inside the lens.



XPEL film is designed to protect from all of these elements. In fact, it can actually help restore lights that are showing signs of wear from pitting. Acting like a wax, the adhesive fills in the surface defects, creating a shiny consistent surface while protecting from any further damage.

Why XPEL Film?

Unlike other films, XPEL Headlamp Protection film has a patented scratch resistant surface coating that provides unmatched levels of durability, stability and longevity. This coating is nearly impossible to scuff and employs a UV inhibitor to prevent shrinking and discoloration, ensuring that your headlights have a flawless appearance over their lifespan.



Why Not Just Use Paint Protection Film?

XPEL Headlamp Protection Film is a proprietary, press-polished, PVC film designed specifically for use on headlights, providing the perfect balance between clarity, protection and ease of installation. The thickness of this film (.030") provides far greater security than paint protection film, while still allowing heat to adequately dissipate from the surface of the light. This added thickness also allows for superior compressibility during installation without worry of creasing the film.

Unlike paint protection film, our press-polished material is optically clear when installed. This is ultra clear appearance is not only important for the general aesthetics of your headlights, but also in guaranteeing a distortion-free light transmission for your nighttime drive.

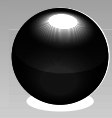
Another benefit over paint protection film is the ability to give your car that distinctively custom look with our Dark Smoke option. Our Dark Smoke covers have been a popular and easy add-on for show cars, sport bikes and customs, adding a distinctive aftermarket look.

Get Yours Today!

XPEL Headlamp Protection Film is available in bulk sheets for in-house production and custom applications, or in model specific precut kits for easier installation and guaranteed accuracy. Call today for a free sample.



CLEAR



DARK SMOKE

XPEL Headlamp Protection Film

Ultra-Clear Press Polished Scratch Resistant PVC Film

Technical Data Sheet – Dec. 2008



General Description:

XPEL Headlamp Protection Film is a patented high performance self adhesive PVC film with a polyurethane scratch resistant coating, designed to protect glass and polycarbonate lighting surfaces from the harmful effects of stone chips, abrasion and weathering. This film is exceptionally conformable when heated for ease of application over the most complex contours. XPEL Headlamp Protection Film is non-yellowing and offers environmental resistance as well as super gloss retention and superior optical clarity. XPEL Headlamp Protection Film is laminated with a 3M high performance acrylic adhesive which has excellent adhesion on a broad range of surfaces.

Typical Applications:

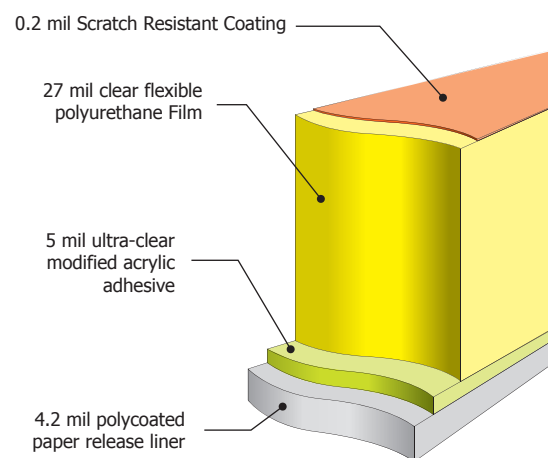
Press polished polyurethane coated PVC for stone chip and weathering protection, high wear and abrasion

Typical Industry Sectors:

Automotive, motorcycle, RV, powersports, and aircraft lighting

Film Construction:

Properties	Typical Values	Unit of Measure	Test Method
Physical			
Scratch Resistant Coating	0.2	mil $\pm$ 5%	
Film	27		
Adhesive	5		
Liner	4.2		
Peel Adhesion			
Initial peel	6.9 N/cm	1 hr @ RT	ASTM D3330
Normal State	7.4 N/cm	7 days @ RT	
After Heat Age	16.5 N/cm	16 days @ 80°C	
After Water Immersion	9.1 N/cm	400 hr 40°C	
After accelerated weathering	13.7 N/cm	1000 hr	
Gloss	>93 %	20 Degree	BS EN ISO 2813
Luminous Transmittance	97%		ASTM D1003
Aging Test (appearance)			
Heat Age	Pass-No Detrimental Effect	16 days @ 135°C	TSM7505G
Water Immersion	Pass-No Detrimental Effect	400 hr @ 40°C	
Post Xenon weathering	Pass-No Detrimental Effect	1000 hr (41 days)	
Outdoor exposure	Pass-No Detrimental Effect	FL exposure-3 yr	
Boiling water resistance	Pass-No Detrimental Effect	5 min @ 100°C	
Stone Chip Resistance - Gravelometer	Pass-No Detrimental Effect	Chipping ratings per SAE	ASTMD3170
Mechanical			
Tensile Strength	22 MPa	Test rate: 1.0 mm/min	DIN 53 455
Tensile Elongation @ Break	230%		
Solvent Testing			
MEK	No Detrimental Effect	10 Double Wipes	
Toluene	No Detrimental Effect		
Acetone	No Detrimental Effect		
Gasoline	No Detrimental Effect		



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Shelf Life:

XPEL recommends XPEL Headlamp Protection Film be stored flat at 50°F-90°F, and 40%-60% RH. Film should be used within three years of purchase.

Installation:

XPEL Headlamp Protection Film is designed to be used on lamp surfaces which the operating temperature reaches no greater than 280°F continuous, including all halogen, Xenon, and HID lamps. XPEL maintains a complete set of detailed installation instructions and installation videos, which may viewed at www.xpel.com. Generally, a wet application of the product is recommended.

Warranty:

XPEL Technologies Corp. warrants XPEL Headlamp Protection Film to be free of any manufacturing or workmanship defects for seven (7) years from the date of purchase. The warranty does not cover damage to XPEL Headlamp Protection Film caused by erroneous application, accidents or collisions, intentional misuse or ordinary wear, nor damage or chips to the protected surface or film caused by impact of rocks or any other debris. XPEL will replace any film that does not meet this warranty. The replacement of damaged film is the exclusive remedy; liability does not extend to any other damages, incidental, consequential or otherwise.

Notice:

The representations of performance and suitability for use contained in this Technical Data Sheet are meant only as a guide. Since only the user is aware of the specific conditions in which the product is to be used, it is the user's responsibility to determine whether the product is suitable for that intended use.