

Protect Your Budget:

10 Automotive Films For the Vehicle Exterior



LINTEC LINTEC OF AMERICA, INC.

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Up-Front *and* Long-Term Savings

It's no secret—automotive budgets are tight. Today's lean supply chains are often tasked with cutting margins so close they could split hairs on a flea. And with continued pressure from carbon emission regulations, manufacturers will continue to need to do more with less. After all, fuel economy for small vehicles is [supposed to reach 50 mpg by 2022](#) **(1)**.

Automotive films present numerous opportunities for manufacturers to balance this delicate budget (and cut weight from the vehicle to boot!). Consider the rise of adhesive films as an alternative to heavier mechanical fasteners, for instance. [ASI reports](#) that "pressure sensitive adhesives (PSAs) usually offer the best value, given their affordability, ease of use and clean application, when compared to alternative bonding options like mechanical fasteners or liquid adhesives" **(2)**.

But reliable, fast, and inexpensive bonding agents are just the beginning. [Automotive PSA's are a booming corner of the market](#) because they're *versatile* (3). There are film solutions for areas all over the vehicle exterior. Automotive PSAs can serve purposes such as:

- Secure, cheap shipping protection
- Long-lasting, self-healing chip/scratch shields
- A cost-effective paint alternative
- Reliable component mounting and bonding
- Dampening for vibrations and cushioning for impacts
- Sealing or weatherstripping
- Attractive emblems, stripe tapes
- Resilient labels for harsh automotive environments

These (and more) use cases all represent chances to save on both *price* and *cost*. Plastic films often feature a lower price-per-unit than their alternatives, yes, but the most significant savings will ultimately come from long-term value—the total calculated cost of the arrangement. This includes upgrades in line times, simpler training, process efficiency, technical reliability, and other value-added elements of incorporating automotive films into your assembly process.

In other words, the effective use of automotive films can cut costs, streamline manufacturing, and ultimately make for a more competitive product. LINTEC Automotive is ready to help you achieve these kinds of savings in your budget—right away—with our selection of automotive films for the vehicle exterior.





10 Films and Tapes For the Automotive Exterior

Our dynamic portfolio of automotive films includes cosmetic, protective, and bonding options to guarantee a flawless finish anywhere on the vehicle exterior. We custom-select adhesive and backing materials to suit the specific needs of every project.

No location or purpose is too niche or advanced. Whether your concern is price point, outgassing, irregular surfaces, stringent OEM specs, rapid temperature fluctuations, or something else—LINTEC Automotive is prepared to meet a high standard of excellence. Here are a few of the LINTEC offerings that protect both your budget *and* your auto parts.



1. SHIPPING PROTECTION FILMS

Temporary protective films are a small investment with huge returns. A simple, elegant solution to the many hidden costs of automotive manufacturing, these low-tack adhesives protect your budget through *cost prevention* in the shipping process.

Damage in shipping can add many kinds of hidden costs to an auto manufacturer's bottom line. For example:

- Production delays
- Warehouse labor inefficiency (for returns and repeat shipments)
- Customer service time (detail gathering, issue resolution)
- Replacement parts and components
- Added freight costs for a second shipment
- Reputation damage

A fast, easy application of shipping protection films prevents unnecessary costs, ensures your products' integrity, and preserves your brand's reputation. Take it from Package Insight, which recently found that the vast majority of buyers (73%) [are unlikely to purchase from a company again after receiving a damaged item \(4\)](#). Product protection ranked as the "most important" shipping factor—above sustainability and ease of product removal—among the options in the survey.

Consider temporary wheel protection films, for example. These residue-free polyethylene adhesives stick on quickly, peel off with no trouble, and protect wheels from all threats on the way from the line to the lot. There's no easier way to sidestep scratches, marks, contaminants, corrosion (especially on brake discs and rotors), and more during the packaging and shipping process.





2. CENTER PILLAR & DOOR SASH FILMS

Awkward, narrow, and hard-to-paint areas of the vehicle exterior complicate the assembly line and stretch budgets thin. Door pillars and sashes may make up a small percentage of the body's surface area, but they still need to be painted—and curing won't go any faster than on the hood or another large panel. To make matters worse, pillars and window frame elements are often painted in a different color (black).

Paint replacement films eliminate all of these problems. A black vinyl PSA tape closely replicates the beautiful finish of black paint while eradicating the costly and time-consuming painting process. [Plastics Today has said](#) that these films “enhance aesthetics and durability while reducing secondary operations that add cost” (5). Consider the efficiency of a product that:

- Presents no compliance or environmental issues due to VOCs
- Removes the masking and priming steps
- Needs no ventilation equipment
- Cures immediately
- Requires minimal training (it's tape)
- Is applied *on the line* rather than in a separate, sealed area

This saves on floor space, equipment, training costs, line times, worker safety, and more. High-performance fluoropolymer and vinyl films will take excessive wear and tear while also providing you with design flexibility (thickness and surface gloss can be customized to your project needs). It's even possible to replicate chrome trim at a fraction of the production cost.





3. ANTI-CHIPPING PROTECTION FILMS

Transparent PVC and polyurethane films provide a durable (and virtually invisible) shield for the vehicle's high-impact areas. Even ordinary driving circumstances can kick up debris or expose the vehicle exterior to incidental abrasions. If you produce rocker panels, fenders, or front fascia, you know that quick degradation of your products under normal road conditions will threaten your reputation.

There are plenty of harsh conditions to cope with on the open road: snow, mud, ice, salt, rain, oils, sand, and more. A durable, hydrophobic anti-chipping film preserves the luster of the underlying paint job for many years with superior weatherability.

Unlike earlier generations, today's coated urethane tapes will not yellow over time with UV exposure, either. Some modern anti-chipping films even self-heal with sunlight alone! Ultimately, you're protecting your budget with an economic investment that provides outsized value-gains for your automotive parts.



4. DOOR & HATCH CUSHIONING FILM

Our new pressure-sensitive ionomer films will absorb repeating shocks and impacts in vehicle hatches or doors at a cost performance that far exceeds previous urethane films. You can also deploy vibration-damping foam polymer tapes to dampen vibrations in these areas and soak up noise that penetrates tiny gaps around the door or hatch. Ambient road noise and door rattling can have a massive impact on the perceived value of a vehicle. Work with films and tapes that not only prevent damage to continuously impacted areas but make for a more comfortable ride.



5. SMOOTH-EDGED MARKING FILMS

Sometimes, injection-molded or tooled metal emblems or trim are worth the expense. However, in many areas, you can save on costs without compromising beauty with industrial-grade marking films.

It doesn't have to break the budget to bestow aesthetic brilliance on your automotive components. We use a proprietary welder process to produce 1-millimeter-thick emblems or marking films with smooth, rounded edges. Adorn rear corners or accent areas with these realistic 3D films that offer superior weather resistance with adhesion that will outlast the life of the vehicle. Our films are available on black or transparent substrates custom-matched to your precise specifications.



6. EXTERIOR MOUNTING TAPES

Rivets, clips, and other metal fasteners are heavy. They're also inflexible, time-consuming (e.g., drilling and tapping holes, torquing fasteners), and can even create unwanted sources of rattle. Glues are simpler, but they're also messier, take a while to cure, and may not work for unlike substrates with unmatched surface energy. Both mounting solutions struggle with differing thermal expansion properties.

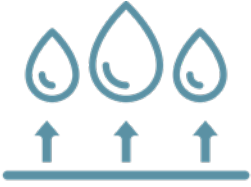
These are just a few of the reasons that thin, industrial-strength foam mounting tapes have started replacing glues and mechanical fasteners on the vehicle exterior. Viscoelastic foam tapes have numerous cost-saving advantages:

- Affordable pricing
- Can be die-cut in advance to precisely match your needs
- Can custom-cater adhesive layers to different surfaces (double-sided tape)
- Straightforward and fast application with instant curing
- A more universal solution—foam will flex to accommodate unlike expansion properties

This isn't even to mention the lightweighting capabilities! In one year (2013 to 2014), the [Cadillac CTS was able to use automotive adhesives to cut 250 lbs. from the vehicle](#) and achieve 7% weight savings (with improved fuel economy) **(6)**.

These reductions in assembly time and expenses have made foam exterior mounting tapes a common solution for securing nameplates, emblems, trim, badges, and more.





7. WEATHER STRIPPING TAPES

A reliable acrylic foam tape provides an excellent weather seal around doors, windows, hatches, and anywhere the penetration of moisture or weather could cause trouble. PSAs will also accelerate the assembly process when compared with the cumbersome application of rubbing or synthetic tubing and gaskets. The pre-loaded adhesive layer provides a strong, consistent seal along the entire length of the bond without any additional labor or assembly.



8. BLACKOUT TAPE

Once limited to long-curing glues and epoxies, automotive glass adhesives have become highly versatile. While window glass has traditionally proven challenging for adhesives—due to its smoothness—modern automotive films have become effective solutions for areas around windshields and windows.

Blackout tapes, in particular, have advanced to meet (and exceed) the high standards set by automotive OEMs and grown into highly popular glass PSAs in the process. An application of blackout tape around the border of a window is not only easier than a dip or coating but is equally effective and cheaper.

Invest in cost-efficient blackout films to streamline your window framing process and escape the tricky, convoluted alternatives.





9. BLISTER-FREE BUMPER LABELS & STRIPE TAPE

Outgassing is a pain when it comes to adhesive films. Blisters, bubbles, and peeling are common issues on injection-molded plastics and polycarbonate that are known to outgas over time.

LINTEC Auto uses cutting-edge cellular film laminates to craft *air-permeable* labels and bumper stripes for thermoplastic substrates. The outgasses pass right through, and the vivid adhesive film's appearance is indistinguishable from other films.

We do it with a composite of a proprietary air-permeable top layer and a micro-channeled surface base that also allows gasses to escape from the sides of the label or stripe tape. Use these handy labels and tapes over a variety of surface bases to apply emblems, stripes, warning labels, and more with superior weatherability at a low overall expense.



10. DURABLE ENGINE LABELS

The engine compartment may seem superficially protected from the elements, but adhesives in this area are exposed to dangerous solvents, intense heat, and other threats. Throughout their service life, engine labels must survive threats like:

- Oils, gas, coolant, antifreeze, and other corrosive agents
- Buildups of grease and grime
- Road salt and kicked up sand
- Rain, ice, and snow
- Rapid temperature fluctuations

Despite this, the engine bay must feature numerous information and caution labels. Plastics with low surface energy are more and more common in modern engines, making this job even tougher. It's easier to save on engine labels when you know the most effective and cost-efficient materials for the job.

High performance industrial acrylic adhesives are formulated specifically for universal adhesion to high and low surface energy, excellent chemical tolerance, and resistance to extreme temperatures (in some cases as low as -40 °F and as high as 300 °F). For label ribbon, polyester and heat-stabilized PVC films are excellent choices for high chemical resistance and low distortion under extreme heat.



Protect Your Budget. Consult With an Expert.

Protecting your budget is about more than just the films you buy. Your chosen supplier will play a critical role in the equation, too. Low *prices* may pique your interest, but they may also be a sign of low *standards* for quality, consistency, and service. It pays to look for suppliers with the traits and expertise to keep production lean and the supplier relationship efficient.

[Research data from Flexis](#) shows that under one-third of supply chain professionals view their collaborative processes as “effective” (7). A truly collaborative supplier can protect you from expenses like miscommunication, added production steps, legal errors, delays and downtime, poor press, and lower revenue.

Our knowledgeable experts at LINTEC Automotive are ready to consult with you on film solutions that will offer your products the highest value at the lowest price. We believe in cooperation and transparency so that our partnership can save you costs both directly (on automotive films) and indirectly (through business efficiency).

However exterior automotive films fit into your project, LINTEC Automotive representatives are here to help. Give us a call, and we’ll get to work on a personalized solution for your project.



About LINTEC Auto:

Since 1934, LINTEC has been a leader in the adhesive field with a reputation for innovation, service, and sustainability. Our philosophy of "customer first" and focus on creative new ideas are the driving forces behind our high-value-added line of core products and services. We strive to exceed your expectations with superior quality and first-rate solutions for all of your automotive film needs.

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