

Finding a Cost-Effective Poly Replacement for Packaging

The Move to Eco-Friendly Packaging

Over the past several years, businesses across multiple industries have taken a growing interest in environmental sustainability. The packaging industry plays a critical role in this movement, as packaging is often the first thing a customer notices about a product. As such, companies are tasked with reconciling environmentally-conscious material selections with cost-effective production.

Petroleum-based plastics, though affordable and easily sourced, are nearly impossible to recycle, The Guardian recently explained; they litter the Earth and pollute oceans forever without biodegrading. Instead, packaging companies must seek out alternatives to create more sustainable solutions. Even candy manufacturers are now looking for eco-friendly wrappers, using wood-based materials and non-toxic ink to create a compostable solution.

Replacing PVC and Plastics in Packaging

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Recognizing this shift toward sustainability, Sierra is seeing a growing opportunity to replace polyvinyl chloride (PVC) and other harmful plastics with greener, biodegradable package made with paper. This is especially relevant to blister packaging; because it cannot be recycled due to mixed material limitations, the packaging tends to wind up in landfills.



PVC and low-density polyethylene (LDPE) resins, found in many of today's packages, are neither recyclable nor biodegradable due to their use in a package design. When exposed to high temperatures, these wrappers can also release toxic fumes and dangerous chemicals into the environment.

Plastics, which for many years held the advantage over paper for being heat sealable, have finally met their match. Sierra has developed innovative paper-based blister pack technology to reduce or replace PVC, LDPE, and other harmful plastics commonly used in packaging structures.

These paper-based recyclable coatings provide protective features that can compete with traditional packaging — but without the negative side effects. Both environmentally friendly and affordable, Sierra's blister packs can be heat sealed while still allowing products to biodegrade much more easily. These state-of-the-art "green" coatings can be used to design packages that reduce PVC or replace



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poly coatings.

Creating a Cost-Effective Poly Replacement

Many companies are seeking affordable poly-replacement materials that will allow their packages to biodegrade, allowing them to position their products as environmentally friendly. For decades, this was a high-priced specialty order, but now Sierra is working on closing the gap on cost-effective poly replacements with paper-based packaging like blister packs.

Until recently, green packaging solutions only existed on a small scale due to relatively higher costs compared to polys. As more brand owners respond to customer desires for an environmental solution, innovation has created alternative options that are reducing costs. Sierra continues to source and test these innovative coatings to drive this technology into the mainstream.

To learn more about the benefits of blister packages, as well as what to consider when designing them, download our eBook, "Critical Elements of Blister Packaging."

Download
the eBook



Download our
**Guide to Critical Elements
of Blister Packaging**

Rising Trends in the Blister Packaging Industry

The U.S. packaging market has seen its share of difficulties in recent years—including high raw material costs and negative environmental impact—but trends on the horizon predict a brighter future for manufacturers, vendors, and consumers alike.

The market is evolving rapidly, largely due to the increased usage of blister packaging throughout the country. Blister packs are highly versatile products that offer several advantages to various consumer goods. The efficiency and

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popularity of blister packaging has sparked several notable



- *Enhanced protective features.* To provide added protection for consumer goods, vendors are utilizing higher-quality plastics and raw materials when producing blister packs. With the use of plastics, blister packs can safeguard any products from possible contamination—particularly in regards to medicine and medical devices. Thermoform plastics can instill blister packs with chemical and wear resistances as well as increased durability.
- *Product and technological innovations.* Manufacturers are constantly on the lookout for high performing solutions with low production costs—blister packaging offers both. Blister packs can be manufactured

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to provide products with longer shelf lives thanks to their anti-microbial qualities. Nanotechnology is also playing a larger role in blister packaging. The use of nanotechnology affords blister packs enhanced barrier protection and reduced weight of the package. This technology is in high demand by pharmaceutical companies requiring improved protection against moisture, oxygen, and other gases for their products; demand for nanotechnology-based packaging is expected to increase by 15% compound annual growth rate during the forecast period.

- *Demand for child safety.* There is a growing demand for blister packs that are safer for children, such as child-resistant and tamper evident products. Child-resistant products are a direct result of numerous poison-related injuries befalling children; non-secure packaging can lead to accidental ingestion of medicines. Tamper evident products also have a positive effect on the packaging market, since they can an early warning sign for avoiding questionable products.
- *Sustainability.* Certain packaging materials can adversely affect the environment. To combat this issue, packaging and manufacturing companies have been encouraged to develop more sustainable products and solutions. Current environmental regulations are forcing vendors to cultivate blister packs that are more eco-friendly; vendors are designing bio-degradable blister packs, which will be expensive to produce and will necessitate increased research to offset added costs.

These rising trends are expected to continue driving growth within the U.S.

market, as manufacturers, vendors, and consumers strive for reliable packaging solutions.

Blister Packs: A Great Choice for Packaging

As important as products can be to consumers and manufacturers, sometimes the packaging can be just as vital. Without proper and secure packaging, products can be stolen, tampered with or contaminated before they get into the hands of consumers.

No matter what side of the market you're on, producer or purchaser, damaged products equate to bad business. So many costs are already involved in the production and distribution of products, and consumers expect to receive functional products—why should both parties end up spending more in the long run?

There are numerous options for packaging, but blister packs many times are a superior choice for your products.

What are Blister Packs?

You might not be familiar with the name, but you’ve surely seen blister packs on store shelves. Blister packs are a type of plastic packaging commonly used for different consumer and pharmaceutical goods; a “blister” is a plastic shell that was thermoformed or plastic molded, then it is adhered to a paperboard or foil—blisters can also be bonded alone, which are called clamshell enclosures.

Blister packs protect products against varying environmental changes and shipping damage—while providing aesthetic value. Blister packs are often paired with custom designs to entice passersby.

Advantages of Blister Packs

Using blister packs offers several benefits to manufacturers and consumers, which include:

- *Product protection.* As mentioned, blister packs act as a barrier between your product and outside elements. The weather isn’t the only thing capable of damaging your product; before getting into the hands of consumers, products can experience all kinds of impact or possible contamination. If you’re buying medicine, be aware that the slightest impurity can make you seriously ill—blister packs can help keep you healthy.

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- *Evidence of tampering.* Products are individually sealed in blister packs, and the packs are designed to be torn in order to reach the product inside. Some blister packaging uses tamper-proof mechanisms and due to this, blister packs can quickly and easily inform consumers if their product has been mishandled or previously opened. Thanks to blister packs, consumers know when to stay away from potentially unsafe products.
- *Versatility of Use.* Blister packs can also be child resistant—these packs use a paper or film layer with a peelable adhesive that must be removed before reaching a product. Some blister packs, such as those made with 15-mil polyvinyl chloride, provide another layer of protection to products; blister packs made of harder substances with bitter-tasting coatings help deter children from chewing on them.

Blister packs are designed for high-speed production and high versatility. Blister packs are useful in various applications, and are often the most cost-effective, aesthetically pleasing, and safest option to package different products.



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Thinking blister pack packaging might be the appropriate solution for your product? Sierra Coating Technologies can help. We have years of experience formulating and applying heat seal and heat activated adhesive coatings, many used in the blister pack process. Learn more about our adhesive coating services on our made to order page, and please feel free to contact us anytime.