

How to Choose the Right Eco Friendly Packaging – Biodegradable vs. Compostable vs. Recyclable

For many years, plastic has been the standard in packaging. As concerns mount over environmental issues, however, there's increasing demand for sustainable alternatives.

In some cities, such as San Francisco, governments are passing legislation that bans the use of plastic bags, while many retailers are proactively taking steps to "go green." Popular food retailer Whole Foods, for instance, no longer uses plastic bags, and 60% of Apple's paper packaging is now made from recycled wood fibers.

✘ According to a recent survey, over half of American consumers said they would choose green products over conventional options if given the choice.

Green packaging is no longer just a niche marketing tactic; with long-term benefits easily outweighing the added costs, they're imperative for remaining competitive in today's changing landscape.

Making the decision to go green is simple. Understanding the various packaging options, costs, and marketing claims is often a challenge for brand owners.

Sierra Coating has been researching and working with poly replacement alternatives for years. Our team can shorten the product development stage by having already screened and tested a number of market-ready alternatives.

When developing an eco friendly package, it's important to consider the specific usage standards that your application requires as well as material disposal methods.

The Ideal Solution

When choosing between biodegradable, compostable, and recyclable packaging; it's important to ensure the chosen material does, in fact, reduce waste efficiently and effectively.

At current standards, there are three optimal solutions for creating an eco friendly package:

1. Make the package smaller to reduce your footprint
2. Utilize recycled materials to create the package
3. Create a recyclable package that can be disposed of in a sustainable manner

For many packaging applications, paper is an ideal solution. Folding cartons are ubiquitous; they are used to ship everything from electronics to pharmaceuticals and provide a sustainable, customer-friendly experience.

Folding cartons can be made out of recycled materials and coated with environmentally-sustainable barrier coatings. Not only is folding carton sturdy, lightweight, and customizable; it's also cost efficient.

Eco-Friendly Packaging and Disposal Options

Compostable Packaging's Geographic Limitations

When disposed of properly, compostable products will break down through microbial digestion into humus, providing valuable nutrients to the soil without releasing toxins or metals.

Under the right conditions, this process takes approximately 180 days. However, this is rarely the case. According to ASTM standards, compostable products must be disposed of at a municipal or industrial facility that uses heat to properly break down the product.

Retailers rarely have control over consumers' disposal methods. Compost facilities are usually located in major cities, limiting the impact and effectiveness of a brand's sustainability effort.

More often than not, materials end up in trash cans and eventually in landfills, which are not conducive to the sustainability goal of the compostable package.

Biodegradable Packaging's Greenwashing Association

Biodegradable packaging materials are broken down by bacteria, fungi, or other microorganisms. This occurs through either anaerobic (without oxygen) or aerobic (with oxygen) degradation.

Unlike other sustainable products, biodegradable materials are not required to meet any specific industry standards or regulations.

And because virtually everything is biodegradable, whether it happens in one year or 100, marketers often exaggerate claims of biodegradability. In fact, the ubiquity of the term has come to be associated with "greenwashing," misleading consumers about the true environmental impact.

To combat this, the Federal Trade Commission (FTC) has set forth the Green Guidelines as a benchmark for marketers.

These guidelines state that a biodegradable product "will completely break down and return to nature within a reasonably short period of time after customer disposal." However, the FTC has yet to pinpoint what is considered a reasonably short period.

Recyclable Packaging: The Most Eco Friendly Option

Recyclable packaging, on the other hand, can be remanufactured into something new after its initial use. Similar to composting, the efficacy of recycling depends on a number of factors.

First, the end user must make the decision to recycle the product, and their recycling center must have the capabilities to recycle that specific material. (Recycling guidelines can vary greatly by region). Also, the product cannot contain any food contamination.

When these requirements are met, recyclable packaging is often the most eco friendly option, since it allows the material to be reused for the same purpose.

Although recycled material requires energy, it still increases the overall product lifecycle. Manufacturers can also take more responsibility themselves by using recycled material as an input of the base product, rather than relying solely on the consumer to recycle.

Additional Resources for Packaging Engineers

At Sierra Coating Technologies, our team of experts can work with you through the development process and customize packaging solutions for your unique needs. Interested in learning more about green, paper-based packaging options?

Further your search and gain a clearer understanding of industry-specific applications with our Glossary of Top Misunderstood Terms in the Paper Industry, or contact our team directly to discuss your next project.

[DOWNLOAD Glossary Guide](#)

How Chemical Companies Work with Toll Coaters

Introducing Sierra's Business Alliance Program

Though there are many keys to success in product development, two are most notable: speed to market and proof of production. To address the time and costs factors associated with developing a new product, business alliances are a great way to work efficiently and effectively.

For example, many chemical companies invest heavily in the development of new products, but need to show proof of a successful production process and

provide finished goods to show potential customers. By working with a coating company in the pre-market stage of product development, a chemical company can expedite a new coating to market.

Why Sierra Customers Toll Coat

According to Robert Porter Lynch's *Business Alliance Guide*, a "variation of product alliances is the joint manufacturing venture, where, because of scale costs, it makes economic sense to build a plant of large capacity, but no one company's market can support the entire production capacity" (page 59).

It is for this reason that contract and toll manufacturers exist – to absorb the fixed overhead costs associated with running a facility, providing clients with a way to create a purely variable cost method of developing new products. ❌

Business Alliance Advantages

There are a number of benefits to forming a business alliance. Primary among them are access to production equipment and technical experience in coating.

When working with a manufacturer who has partnered with clients across a variety of industries, you benefit from having a highly knowledgeable product development expert with wide-ranging industry contacts.

Alliances also facilitate knowledge sharing between companies and can allow for new product applications in niche markets.

Sierra Coating's Chemical Business Alliance Program

As part of our Sierra Chemical Business Alliance Program, we are currently looking to form dedicated alliances with chemical companies that have developed innovative product solutions of their own. Sierra often recommends water-based chemicals for our clients' products in order to meet their specific needs.

As a trusted toll and contract manufacturer with services, such as raw material planning, our team works with paper mills, printers, and brand owners to help develop new products.

To best guide our clients in choosing the proper chemicals to use, Sierra also works with chemical companies to develop a solution for our client's requirements. Through this process, we facilitate growth for both our customers and ourselves.

What Our Clients are Looking For

Sierra serves clients across a wide variety of industries, but certain requirements come up more often than others. Our expertise is particularly pronounced in industries – such as the food and beverage, health and beauty, and retail industries, to name a few – that have product needs requiring

unique and highly specialized chemical treatments.

We frequently receive inquiries about innovative food-safe packaging, eco-friendly packaging and other poly replacements, heat seal and blister pack coating, and high-end luxury packaging. These are fast moving spaces that require regular innovation and reinvention to not only stay ahead of trends but to keep products compliant with ever-changing industry standards and guidelines.

To learn more about the benefits of a business alliance with Sierra, including the unique toll and contract manufacturing benefits that we bring to the table, [click here](#).

