



Introduction

According to recent government <u>data</u>, annual U.S. retail e-commerce sales exceeded \$1.1 trillion in 2023 — a 7.6% increase over the prior year — with e-commerce accounting for 15.4% of total retail sales last year. In Canada, e-commerce represented 11.5% of retail sales in 2023.

Online shopping is not a trend, but it is here to stay. Consumers appreciate the safety, convenience, variety, and competitive pricing provided by online platforms. Omni-channel retail is moving beyond web-based retailers to include B2C and D2C, social media sites with online marketplaces, smart device apps, quick commerce, and more. E-commerce packaging has unique design and logistical considerations driving new trends and strategies.

Here are the "fast five" principles for effective e-commerce packaging.

^{*}The brands mentioned in this report are trademarks of their respective owners. Inclusion of these brands in this report is not meant to imply an association with or endorsement from the respective trademark owners.

Durable

E-commerce products may be handled up to four times more than packaging sold through traditional retail and, therefore, they need to withstand rigorous conditions and rough treatment. Fragile glass bottles and jars can break. Plastic caps, triggers, and other components can crack and cause leaking. Aluminum cans can dent, making the product inside unsafe and unusable. Broken primary packaging leads not only to replacement costs but also reputational costs. Even cosmetic damage - like scuffs, dents, and imperfections that don't impact form, fit, or function - can also lead to a negative user experience.

There are thousands of e-commerce-ready stock packaging options that have been put through rigorous testing to assess pressure, vibrations, leaking, temperature control, and impact to simulate potential hazards during shipping. However, not all have been validated to work with

a specific product or formulation. Berlin Packaging's quality and engineering teams evaluate and develop designs that perform properly for our customers' products, whether they are sent via e-commerce or pallet.

Berlin Packaging also supplies e-commerce-ready packaging solutions for every end market, including our proprietary MODATM system. The MODA™ is designed exclusively for Berlin Packaging

customers and is a stock-available polypropylene pump that passes the rigors of ISTA-6 OB protocols for up to 500mL bottles. In addition to meeting e-commerce needs, the pump has a modern aesthetic and a locking pump actuator that reduces product waste.

The versatile packaging system is e-commerce indicated for a variety of formulas including hair care, skin care, and more.

Custom design solutions can also help combat unique e-commerce challenges. When online sales increased and leaking challenges arose with The Honest Company's 70 oz. detergent bottle, Studio One Eleven® created a package to withstand rigorous e-commerce handling. The inventive structure employs a thick liner to minimize the assembly gap while ensuring a robust seal, unscrewing threads for secured assembly, and ribs to create a sealing surface that meets the design intent. The closure sits flush on the bottle for a seamless marriage of the two components.









Sustainable

Today's consumers care about sustainability more than ever and are demanding eco-friendly packaging solutions, including recyclability, recycled materials, and refill systems. For a packaging solution to be truly sustainable, it needs to perform at every stage of its journey, from the warehouse to the consumer. Shipping is a big part of an e-commerce package's journey and contributes significantly to its carbon footprint. According to the EPA, greenhouse gas (GHG) emissions from transportation account for about 29% of total U.S. greenhouse gas emissions.

When it comes to transportation, right-sizing your package to ensure it's not larger than it needs to be can reduce the environmental impacts of shipping. Lightweighting - reducing the weight of your package by rethinking the size, material, or unneeded components - can also make a difference. Efficient packaging can reduce fuel consumption and emissions associated with shipping.

Berlin Packaging's sustainability team conducts lifecycle analyses (LCA) to help our customers quantify their product's environmental impact over the course of its entire lifecycle. With LCAs, we can calculate a product's environmental footprint, including its carbon footprint (greenhouse gas emissions) and water, mineral resource, and fossil fuel use.

Our LCA tool has helped many customers balance sustainability with brand positioning, performance, and functionality. We partnered with online wine retailer Naked Wines to create glass wine bottles that are 29% lighter than comparable products. Our LCA tool uncovered significant reductions in fossil fuel use (-3,375 tons), CO2 emissions (-986 tons eq), water usage (-321,553 m3), and glass usage (-1,901 tons).

Driving Positive Impact with Naked Wines

Reducing environmental impact by switching to lightweight bottles



2,309 Barrels of Oil Saved



Passenger Vehicles Taken Off The Road



84,954,635 Gallons Of Water Saved



470 Acres of Forest

We also helped direct-to-consumer brand Branch Basics with a pouch for their Oxygen Boost product. The pouch weighs 89% less than a plastic container and holds twice the amount of product. This results in reductions of 14.6 tons of CO2 emissions every year in shipping.



Compliant

Several online retailers and shipping companies have e-commerce packaging guidelines, including Amazon, Walmart, and UPS. Amazon's mission is to optimize the overall customer experience by collaborating with manufacturers worldwide to invent packaging that delights customers, eliminates waste, and ensures products arrive intact and undamaged. Amazon Packaging Support and Supplier Network (APASS) is a group of packaging and supply-chain experts who are certified to ensure items warehoused and fulfilled by Amazon adhere to their packaging guidelines.

Amazon also prioritizes sustainability with a sustainable packaging initiative that helps customers and the environment. They are so serious about sustainability that if a brand doesn't comply with their regulations, it could incur fees and up-charges of \$1.99 per item. Berlin Packaging's e-commerce know-how, sustainability expertise, responsive QSD (quality service division), and APASS certification allow us to help resolve problems, prevent waste, reduce costs, and improve the consumer experience.

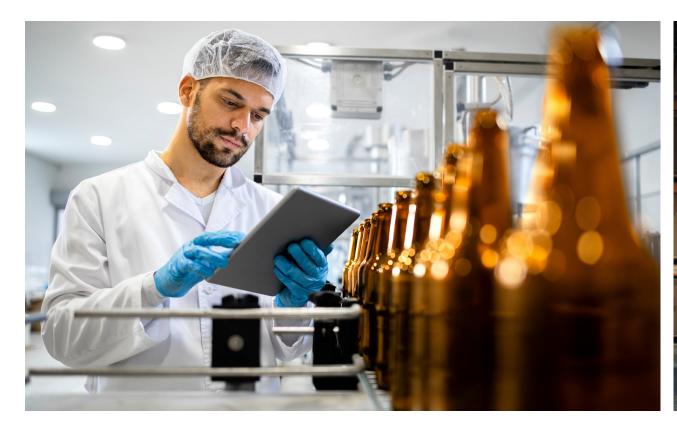
Delight Customers

Eliminate Waste

Improve Durability

It is essential to partner with a packaging supplier who understands the ever-changing guidelines surrounding e-commerce packaging. Berlin Packaging has been APASS-certified since January 2019. With extensive knowledge of Amazon's Frustration Free Packaging (FFP), Ships in Product Packaging (SIPP), and Prep-Free Packaging (PFP) tiered categorization system and testing requirements, we can help customers with design, development, sourcing support, and more. Our teams analyze, test, verify, and certify packaging solutions to ensure they meet all requirements.









Impactful

E-commerce packaging needs to be designed not only to withstand physical impact but also to maximize visual impact. Even in the virtual world, packaging can influence consumers' impression of a brand. In the case of online shopping, consumers can't handle the package, see the contents inside, or quickly identify the product size. Instead, packaging needs to perform well when viewed on a computer monitor, tablet screen, or smartphone. Brands must consider how a design will look on a white background, as a small thumbnail image, or when displayed next to dozens of other products on an e-commerce site. The Studio One Eleven design teams understand the fundamentals of brand design for e-commerce applications.

Bold colors, unique silhouettes, and custom design elements can help a brand get noticed on shelf and online. The Studio created a custom bottle and label design for Zenwise with e-commerce in mind. The rounded square shape differentiates from conventional round forms with a unique concave shoulder that creates an ownable equity element forthe brand. The bold, black color stands out on retail shelves and digital screens. The label graphics complement the bottle with a clean, fresh white background that pops off the black bottle, and bold color bars quickly communicate the product benefit for easy shoppability.

Simplicity is also important. Minimalism is an ongoing trend in package design, and it is essential in e-commerce when consumers see just a small image. Simple doesn't have to mean boring. Simple package design often feels more authentic, trustworthy, and premium. It can break through the online clutter and provide visual relief that attracts and engages consumers.











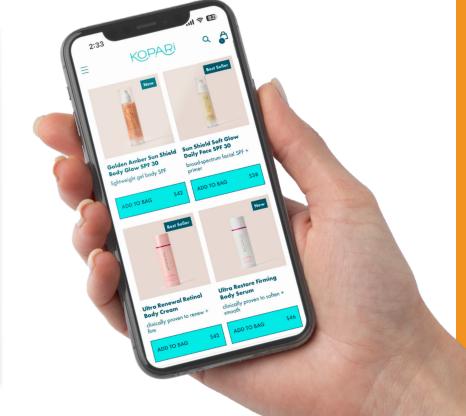
Experiential

Consumers are looking for unique experiences and those that are tailored to their needs and interests. This is evident in the growth of D2C subscription programs that allow consumers to try a variety of curated and customized products. E-commerce packaging provides a unique opportunity to create a more robust and memorable user experience. The unboxing process has become increasingly important, especially among younger consumers and social media influencers who post videos opening their packages. The #tiktokmademebuyit hashtag received 15 billion views, demonstrating the power of experience and discovery.

Secondary packaging and shipping cases can create enticing and memorable engagement that drives trial and promotes brand loyalty. Consider how the package opens – does it create a sense of excitement and anticipation? How is the product displayed - does it feel special and unique? Do the materials and finishes elevate the experience? How can you add an element of surprise for added delight? Berlin Packaging creates inspired secondary packaging solutions for distilleries, personal care brands, and more.

E-commerce also provides opportunities for interactive packaging solutions that elevate the consumer experience. According to GlobalData, one in four Gen Z and Millennials say interactive packaging is a key purchase driver. Packaging with smart features like QR codes and near-field communication (NFC) technology can redirect shoppers to a brand's website to browse and order products, view tutorials, read and leave reviews, discover ingredient information, learn about a company's social or environmental initiatives, and more.















We Believe Anything Is Possible®

With over 100 years in the packaging industry, more than 2,000 packaging professionals and a global network of suppliers and warehouses, we offer 50,000+ SKUs of plastic, glass, and metal containers, closures, and dispensing systems across all markets for customers just like you.

Our Business Model

Berlin Packaging combines the best elements of manufacturing, distribution and logistics, and value-added service providers to deliver cost-effective packaging solutions to our customers. Our mission is to improve our customers' net income through packaging products and services. We are the world's largest Hybrid Packaging Supplier®.



Value-Added Specialty Services

Our compelling suite of solutions addresses your needs and unlocks profit.

- · Custom Design & Innovation
- · Quality Service Management
- · Global Sourcing & Services
- · Inventory Management Services
- Sustainable Packaging Solutions
- · Berlin Financial Services