



# INDUSTRY UPDATE

## MARCH – APRIL 2023

RESINS & RAW MATERIALS

VALUE-ADDED PACKAGING

OCEAN FREIGHT

DOMESTIC TRANSPORT

# RESINS & RAW MATERIALS

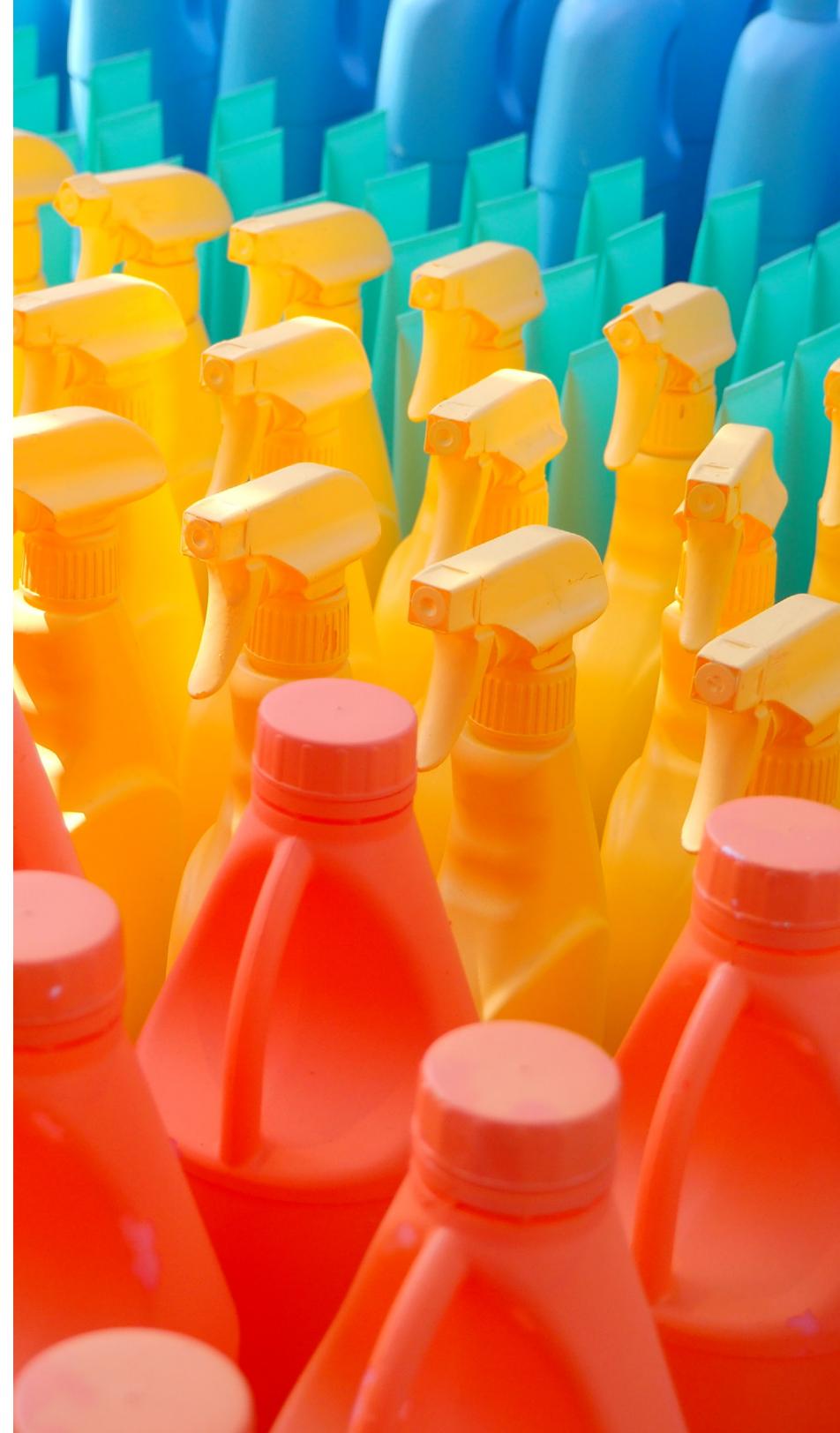
Berlin Packaging maintains a best-in-class approach to sourcing packaging materials and manufacturing platforms. We are not bound to a specific material or technology, affording us tremendous flexibility to find the most cost-effective packaging solutions for our customers.

## RESINS & RAW MATERIALS

**Prices for many packaging raw materials appear to be on the upswing.** Winter storms impacted production and triggered temporary supply disruptions. Feedstock costs have risen due to the volatility of energy markets.

The war in Ukraine continues to elevate energy and raw material costs in Europe. Although ocean freight rates are retreating, these added costs are hurting the competitiveness of European packaging products in global commerce.

Following a gradual slowdown in the last few months of 2022, inflation rose again in January. The Producer Price Index for final goods increased by 1.2%. It's the largest increase since June 2022. Another inflation measure — the Consumer Price Index — climbed 0.5% in January, after averaging monthly gains of 0.23% in the past six months.





## PLASTIC RESINS

Despite sluggish demand, resin prices have risen since the start of the year. Weather-related events and scheduled production cutbacks are dampening capacity. Elevated feedstock costs are lifting prices. Resin producers are boosting exports to tighten the supply/demand balance.

Here is a brief rundown of the current market conditions for various resins:



### **PET (Polyethylene Terephthalate):**

Small improvements in demand combined with higher feedstock costs have led to increased PET prices.



### **HDPE/MDPE/LDPE (Polyethylene):**

A tightening of supplies and lower inventories have resulted in higher PE prices.



### **PVC (Polyvinyl Chloride):**

PVC prices have risen because of supply interruptions from winter storms and inventory drawdowns from construction buyers.



### **PP (Polypropylene):**

Supply disruptions from winter storms and a reduction of inventory have led to increased PP prices.



### **PS (Polystyrene):**

An increase in benzene feedstock costs has pushed PS prices higher.

### **Post-consumer recycled (PCR):**

Natural post-consumer rHDPE pellets for blow-molding applications continue to command a premium price because of their color flexibility for CPG brands, while mixed-colored post-industrial rHDPE pellet prices remain flat. Prices for food-grade rPET flakes have rolled over recently due to steady feedstock costs. But those prices may rise as seasonal demand for summertime beverages accelerates.



## GLASS

Domestic glass manufacturing remains generally tight across most markets, with some specific segments (i.e., wine and liquor/spirits) showing signs of gradual capacity improvements through 2023. Except for EMEA (Europe, Middle East, and Africa), global glass production continues to have adequate capacity.

Most glass furnaces are powered by natural gas. Domestically, natural gas indexes are trending downward through April and are projected to start increasing again through the second half of 2023. Energy costs in EMEA remain high and are constraining capacity in the region.



## ALUMINUM

In February, the United States announced a 200% tariff on aluminum imports that were smelted or cast in Russia. Since the U.S. imports only 3% of its aluminum from Russia, this action is unlikely to impact prices.

Aluminum cans are recycled more than any other container. In 2020, consumers recycled 45% of aluminum cans, compared to 40% of glass bottles and 20% of plastic bottles. Aluminum cans contain 73% recycled content, while glass bottles comprise 23% recycled content and plastic bottles just 3–10%.



## TINPLATE STEEL

Due to high inventories of tinplate steel throughout the world, the price of the metal has been dropping since the second quarter of 2022. Prices moved up slightly in January as China continues to fully reopen its economy. This increase may be temporary, as demand remains tepid.

The global market for metal packaging is expected to grow by 3.6% (CAGR) and reach \$178 billion by 2032, according to Future Market Insights. The largest segment — food and beverage — is projected to increase by 2.9% (CAGR), surpassing \$60 billion by 2032.

## PULP & PAPER

According to the Fiber Box Association, U.S. shipments of cardboard boxes fell 8.4% in the fourth quarter of 2022, the biggest quarterly drop since the financial crisis of 2009. Containerboard production decreased 5% last year compared to 2021, with most grades of containerboard experiencing double-digit percentage declines in the fourth quarter, reports the American Forest & Paper Association.

Spurred by the growth of e-commerce shopping, the Producer Price Index for corrugated and solid fiber box manufacturing has been increasing steadily since 2021. In the past 12 months, the index has climbed 30%. While demand for corrugated products is down, prices remain elevated due to the increased manufacturing costs associated with raw materials, labor, energy, and transportation.

**Although Berlin Packaging cannot control the price of raw materials, we do offer multiple value-added services and income-boosting solutions to help our customers Package More Profit®. Over the past few years, Berlin Packaging has added more than \$200 million in profit to our customers as a unique benefit of doing business with us.**

A hand in a blue business suit jacket points upwards towards a glowing yellow arrow that curves upwards. The background features a blurred bar chart with various colored bars (blue, red, green) and a dark, bokeh-lit background.

# **VALUE-ADDED PACKAGING**

Berlin Packaging's mission is to improve our customers' net income through packaging products and services. We help to increase their sales, reduce costs, and/or improve productivity. Along with having a positive impact on their income, we are committed to providing accurate and timely information and product.

## VALUE-ADDED PACKAGING

**What do you get from your packaging supplier? If the physical package or component is the only thing that comes to mind, it's probably time to re-evaluate your provider.** In this uncertain and slowing economy, you need to extract the most value possible from your business partners to maximize your bottom line.

How do you find the added value to enrich your packaging products? Start by looking at the specialty services offered by your packaging supplier. Services like custom design, inventory management, global sourcing and supply chain management, sustainability, and quality advocacy can reduce your capital costs and boost your financial performance.

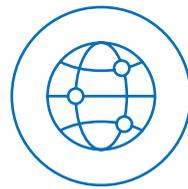
Let's take a closer look at how each of these services can add significant value to your operations.



Custom  
Design



Inventory  
Management



Global  
Sourcing



Sustainability  
Solutions



Quality  
Advocacy





## **CUSTOM DESIGN**

Stock packaging works well for many applications. But sometimes, a product needs something special and unique — a custom package that personifies the brand. Innovative design can uplift a brand from everyday ordinary to premium status, improving price margins. Custom packaging can help differentiate your product in a crowded category, increase sales volumes, and garner greater consumer loyalty.

Studio One Eleven<sup>®</sup>, Berlin Packaging's in-house design and innovation division, offers world-class expertise from concept through commercialization. Our comprehensive services encompass brand strategy (market insights, category trends, product positioning), structural package and closure design (3-D modeling, rapid prototyping, custom tooling), product design, visual branding (logo & label design), and promotional and secondary packaging.

For qualified customers, Studio One Eleven waives its fees for these extensive services in exchange for packaging supply opportunities.



## **INVENTORY MANAGEMENT**

Inventory is a significant company investment, representing up to 30% of a company's total assets. If misunderstood or mismanaged, it can hurt financial performance. Too much inventory creates storage challenges, reduces cash flow, and raises costs. On the other hand, too little inventory presents its own set of problems — stockouts, production downtime, and unhappy customers.

Berlin Packaging recently invested in people (demand planners), processes, and AI-enhanced data technology to proactively right-size our customers' inventories and help our manufacturing partners better plan their production schedules and forecast their sales. As a result, customers now have the right products at the right time.

With more than 6 million square feet of warehouse space in 130+ locations around the globe, Berlin can successfully manage your inventory, handle logistics, and deliver packaging components exactly when you need them. We are in the inventory business, so you don't have to be.



## GLOBAL SOURCING

Sourcing products from a global network of suppliers offer many options in packaging material substrates, manufacturing platforms, and custom tooling and mold development. This flexibility to pick and choose from hundreds of packaging suppliers typically results in reduced product costs, lower tooling costs, smaller minimum order quantities, and shorter lead times.

However, global supply chains are more complex, with many moving parts from the manufacturer and ocean carriers to the port operations and warehousing. Berlin Packaging's multi-country, multi-region sourcing strategy splits production volumes among different countries to ensure product availability in the event of economic, political, or social turmoil.

With our global network of 900+ qualified manufacturing partners, access to over 50,000 packaging components, and immense purchasing power, we manage time differences, language barriers, quality expectations, compliance issues, scheduling, customs clearance, logistics, and more — so you don't have to.



## SUSTAINABILITY

More than a quarter of global shoppers actively seek out sustainable and environmentally-friendly products when making a purchase, according to a recent GlobalData survey. As consumers become increasingly ecologically conscious, brands are stepping up to meet the demand for sustainable products and packaging. Using recyclable (and recycled) materials, reducing packaging materials (lightweighting), and creating reusable and refillable packaging are all ways to support sustainability.

Berlin Packaging's sustainable packaging strategies focus on material circularity, optimization, and refill and reuse to find the most cost-effective packaging solutions. Our expansive suite of consulting services helps you identify market trends, source and integrate post-consumer recycled (PCR) content into your packaging portfolio, quantify the environmental impact of your packaging through life-cycle assessments, and communicate your sustainability progress.



## QUALITY ADVOCACY

Quality breeds business success. High-quality products drive new and repeat purchases, strengthen brand loyalty, support superior pricing, improve retail shelf positioning, expand sales channel growth, and elevate company and brand reputations — all of which lead to increased profits.

Conversely, poor quality results in dissatisfied customers, scrap and product rework, pricing markdowns, lost business opportunities, and lower profit margins.

Specifications, inspections, and measurements are key to evaluating quality. As part of our ISO 9001 certification at Berlin Packaging, we track three quality objectives: on-time delivery, product quality, and business performance. Our Quality team has over 100 years of combined experience in proactive and corrective processes.

For many of our customers who lack internal quality resources, we are their quality advocates with more than 900 qualified packaging suppliers around the globe.



## KEY TAKEAWAYS

Look beyond the physical packaging component you're buying to uncover additional resources from your packaging suppliers. Take advantage of the specialty services like custom design, inventory management, and sustainability to support your business growth and enhance your net income.

At Berlin Packaging, our value-added specialty services enable you to Package More Profit®.



# OCEAN FREIGHT

As volatility persists in many global trade lanes due to blank sailings, Berlin Packaging continues to proactively search for alternate routings and provide real-time visibility of the global freight market to help our customers minimize any disruptions to their supply chains.

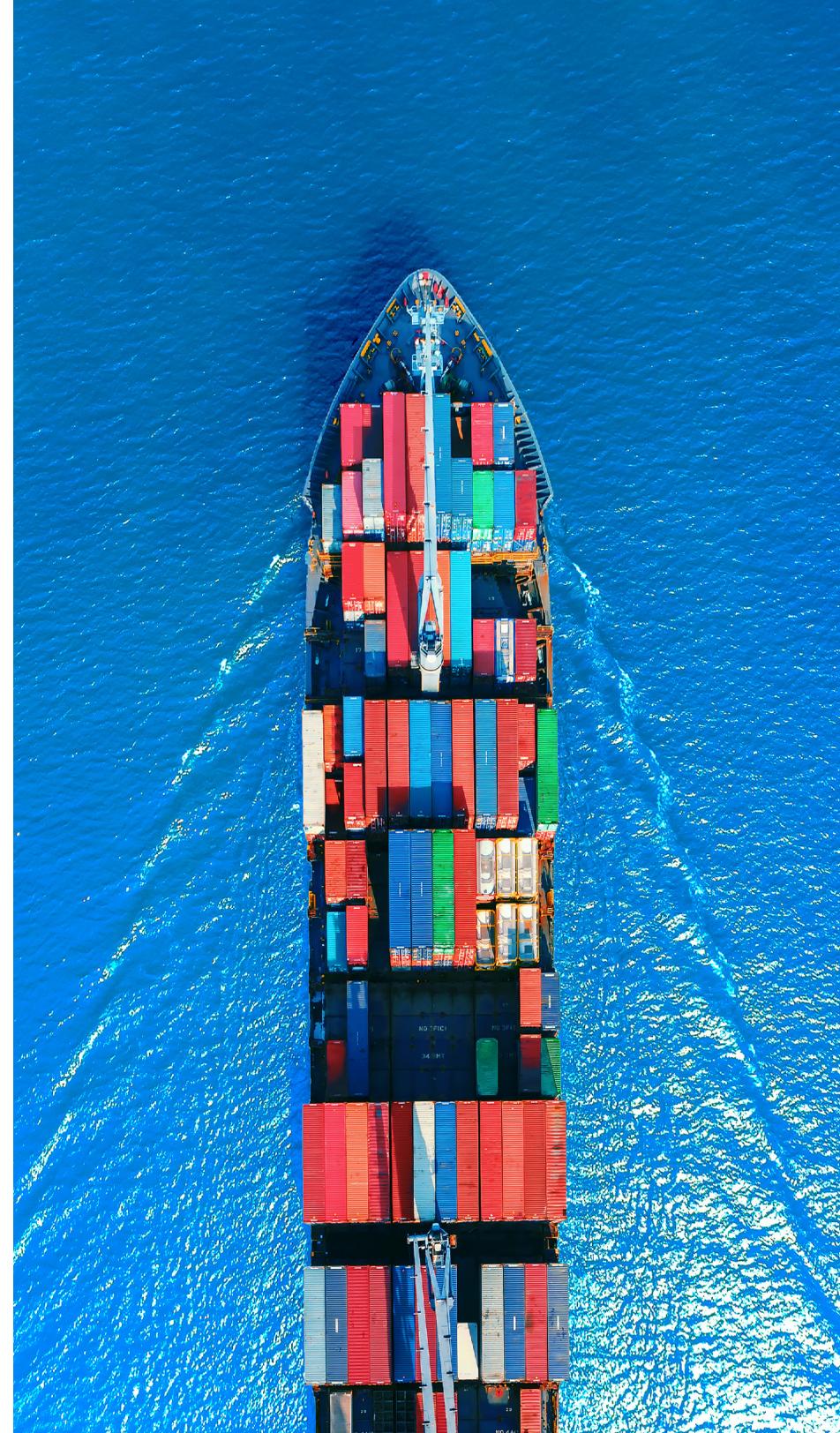
## OCEAN FREIGHT

**Ocean freight spot rates on most major global trade lanes have returned to pre-pandemic levels, with the exception of the trans-Atlantic lanes from Europe to North America.**

Continuing weak cargo demand is keeping a lid on prices. Major ocean carriers have increased their skipped or blank sailings to align capacity with the lower demand and to prevent further spot price erosion.

Schedule reliability improved in the second half of 2022, ending the year at 56%, reports Sea-Intelligence — a marked improvement from 2021 when schedule reliability ranged from 30% to 40%. Before the pandemic in 2018 and 2019, schedule reliability averaged about 75%.

Manufacturing interruptions and shipping problems in China have prompted importers to pursue a “China-plus-one” sourcing strategy to increase the reliability of their supply chains. Last year, China recorded its second-worst year of economic growth since 1976.



## PORT ACTIVITY

West Coast ports in the U.S. continue to lose import volume to Gulf Coast and East Coast ports due to the unresolved labor contract between port terminal management and dockworkers. Because of this uncertainty, more capital investments are being made at non-West Coast ports.

In January, the ports of Los Angeles (LA) and Long Beach (LB) saw containerized imports rise versus December, but down year-over-year and less than pre-pandemic levels. Port management expects further import declines in February, a softer market heading into the second quarter, and better import numbers in the second half of the year coinciding with traditional peak-season volume.

The shift in trans-Pacific trade from the West Coast to East and Gulf ports is nothing new. About 80% of trans-Pacific trade flowed through West Coast ports in 2002. In 20 years, that percentage has dropped to 56%.



## NEW NORMAL FOR IMPORTS

Here's another indicator of the new normal for imports. While the ports of LA/LB posted January import volume declines of 10% and 15% compared to January 2020 (pre-pandemic), the ports of Savannah and Charleston tallied import volume gains of 12% and 20% versus three years ago.

Nearly all North American ports are clear of waiting ships, thanks to both lower import demand and the recent factory closures for Asia's Lunar New Year holiday. Most backlogs at port terminals and inland transportation systems have also disappeared. The majority of transportation problems are now confined to chassis shortages and weather-related delays.

**As a Customs Trade Partnership Against Terrorism (CTPAT) Certified importer, Berlin Packaging and our customers reap multiple benefits, such as reductions in customs freight examinations, “front of the line” status during inspections/exams, shorter wait times at the border, and more.**



# DOMESTIC TRANSPORT

With a dedicated team of logistics specialists, Berlin Packaging has expertise in all modes of transportation — truckload, LTL, intermodal, and parcel — to ensure our customers receive competitive rates.

## DOMESTIC TRANSPORT

**The combination of expanding carrier capacity and soft freight demand (amid weaker consumer spending and slighter import volumes) continues to put downward pressure on transportation costs in North America.**

Truckload (TL) freight has grabbed a larger share of the transportation pie over the past several months, suggesting freight is moving to TL from other transport modes. Diesel fuel prices have dropped since last fall, down nearly 90 cents per gallon from mid-November to mid-February.

Rail service is improving with rising intermodal capacity and less congestion. Following a U.S. government-mandated labor contract late last year, railroad employers and unions are negotiating to resolve a key issue of sick time. Several sick leave agreements reached between the groups this year allow up to seven paid annual sick days.



## TRUCKLOAD

In step with the typical seasonal pattern, line-haul costs per mile for the dry van spot market have been steadily declining since the beginning of the year. In mid-February, dry van spot rates per mile averaged \$1.98, down nearly 40% from the historic highs of one year ago. Spot rates are about 60 cents per mile less than contracted rates.

In mid-February, the number of weekly dry van spot shipments was down nearly 14% compared to the same time a year ago. However, the 2023 shipment numbers were above the February average from 2015 through 2019.

Van load-to-truck ratios — an indicator of demand (no. of loads) and capacity (no. of trucks available to carry those loads) — have hovered around 3 loads per truck since October 2022. In comparison, the ratio was over 9 loads per truck in January 2022. Higher ratios equal higher truckload rates, while lower ratios spell lower shipping costs.

## RETAIL IMPORTS PLUMMET

Retail import volumes at major U.S. container ports dropped 1.2% in 2022, reports the National Retail Federation (NRF). “With the U.S. economy slowing and consumers worried by rising interest rates and still-high inflation, retailers are importing less merchandise,” says NRF VP Supply Chain and Customs Policy Jonathan Gold.

On a year-over-year basis, the NRF predicts import volumes will drop 26% in February, 25% in March, 17% in April, and 19% in the first half of 2023. “February is traditionally a slow month, but these are the lowest numbers we’ve seen in almost three years,” notes Gold.

## DIESEL FUEL PRICES DROP

In mid-February, the average price for diesel fuel in the U.S. was \$4.37 per gallon — about \$0.32 higher than one year ago. Diesel prices have fallen nearly \$1 since November 2022. In early February, the European Union banned the entry of Russian diesel fuel and other refined oil products. This action may lead to higher fuel prices globally.

**Average price for diesel fuel**  
(per gallon)

**\$4.05**

February 2022

**\$5.33**

November 2022

**\$4.37**

February 2023

## **PARCEL VOLUMES DECLINE, BUT PRICES RISE**

According to government data, U.S. retail e-commerce sales reached \$262 billion in the fourth quarter of 2022 — a slight decrease from the third quarter and a 6.5% rise from the fourth quarter of 2021. Retail e-commerce sales in the fourth quarter of 2022 accounted for 14.7% of total retail sales.

Total e-commerce sales for 2022 were estimated at \$1,034.1 billion, an increase of 7.7% from 2021 and the first time annual e-commerce revenue has exceeded one trillion dollars. While e-commerce sales continue to rise, the pace of growth has slowed.

This year, U.S. lightweight parcel volumes are expected to be down from the pandemic-buying boom, but still surpass 2019 volumes by 20%, according to a report from DHL eCommerce Solutions. Parcel shipping prices are running 10% higher in 2023, compared to last year.

**Berlin Packaging maintains strong and enduring partnerships with local carriers, resulting in best-in-class service and competitive costs that benefit our customers.**



## **LESS-THAN-TRUCKLOAD (LTL)**

U.S. manufacturing is sluggish, according to the January Manufacturing ISM Report on Business. The manufacturing sector contracted in January for the third consecutive month, while ISM's production index registered two months of contraction. The new orders index remained in negative territory for the fifth consecutive month.

Because of the historical correlation between manufacturing output and LTL freight tonnage, the weakness in manufacturing indicates the continued deterioration of LTL shipment volumes. Despite slowing tonnage, LTL carriers are adhering to strict pricing discipline.



# We Believe Anything Is Possible<sup>®</sup>

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

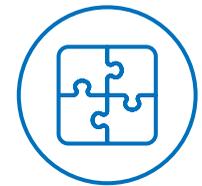
Berlin Packaging is not a distributor. We're not a manufacturer. And we're not a packaging consultancy. Instead, we're all three at the same time. We are best-of-breed amongst manufacturing, distribution, and value-added service providers. We are the world's largest **Hybrid Packaging Supplier<sup>®</sup>**.



Best Elements of a Manufacturer



Distribution & Logistics



Value-Added Specialty Services

## Specialty Service Divisions

We offer value-added services specialized to best address all your packaging needs.

- Branding Strategy & Design
- Quality Advocacy
- Global Capabilities
- Warehousing & Logistics
- Financing & Consulting
- Sustainability Solutions