Industry Update July/August 2022

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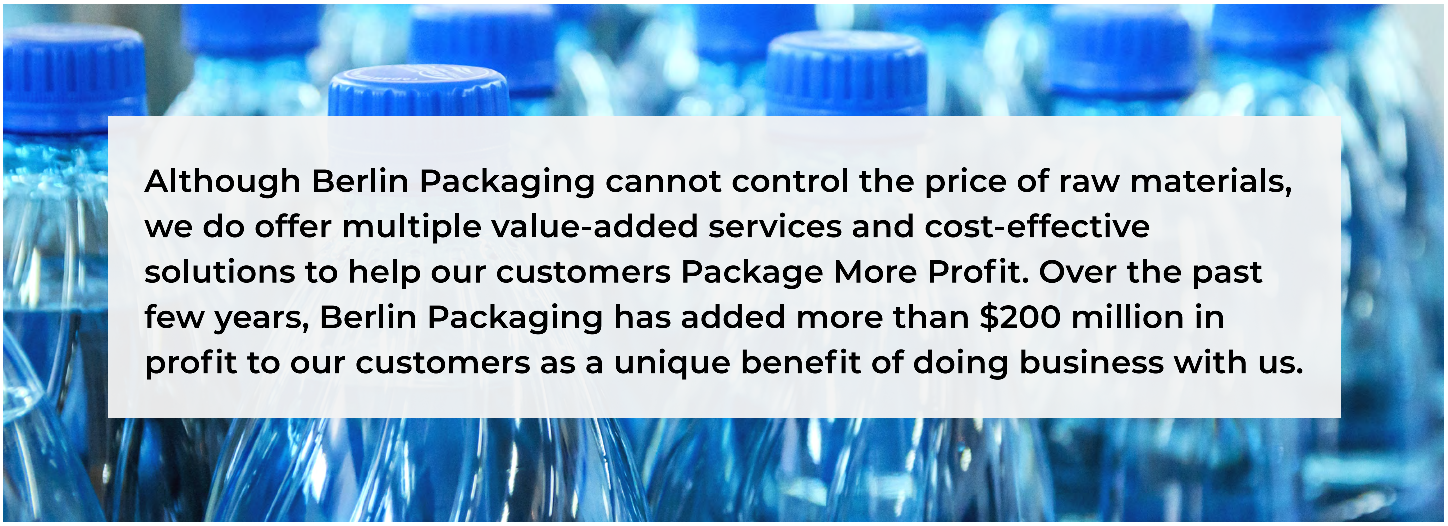
Resins & Raw Materials



Although Berlin Packaging cannot control the price of raw materials, we do offer multiple value-added services and cost-effective 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.

Prices for most packaging raw materials remain elevated due to strong demand, tight supplies, higher feedstock costs, and rising energy rates. A new tax on plastics and chemicals, which took effect July 1, will increase the cost of plastic goods.

Inflation is also moving prices higher. In May, the U.S. Consumer Price Index (CPI) increased 1% from the prior month and rose 8.6% for the preceding 12 months — the largest increase since December 1981. The energy index jumped 34.6% over the last year — the largest 12-month increase since September 2005. The food index increased 10.1% for the preceding 12 months — the first increase of 10% or more since March 1981.

Plastic Resins

As part of the infrastructure legislation that was passed last November in the U.S., the law includes a Superfund Excise Tax that took effect July 1. The tax applies to both plastic resins (e.g., PET, HDPE, LDPE, PVC, PS, and PP) and feedstocks (chemicals). Depending on the resin and chemical, the tax will add about 0.2 cents to 0.5 cents per pound of material.

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

PET (Polyethylene Terephthalate):
Strong demand combined with limited inventories, production interruptions, and transportation bottlenecks have resulted in increased PET prices.

Resins & Raw Materials

HDPE/MDPE/LDPE (Polyethylene):
Despite a slight price increase in May, sufficient inventories and softening demand are keeping prices nearly flat for PE. Added production capacity in the third and fourth quarters plus limited export opportunities may result in price erosion this fall.

PVC (Polyvinyl Chloride):
While demand is strong, record-setting production and rising inventories are keeping prices flat for PVC.

PP (Polypropylene):
Improvements in supplies and a softening demand have decreased PP prices.

PS (Polystyrene):
Strong demand and rising raw material costs (e.g., benzene) have led to increased PS prices.

Post-Consumer Recycled (PCR):
PCR resin prices remain elevated due to strong demand from CPG companies and limited recycling infrastructure to increase supply. In Europe, the widening price gap between recycled PET and virgin PET has prompted some recycled PET buyers to switch to virgin resin.

Glass

An energy-intensive industry, glass packaging is being impacted by soaring energy rates. Other factors contributing to higher costs include labor, raw materials, and transportation. Strong demand and tight supplies of glass packaging — both domestic and international — continue to put upward pressure on prices.

Resins & Raw Materials

In response to tight glass supplies, Berlin Packaging has identified and partnered with glass producers domestically and abroad to exclusively source additional glass capacity. We also can find cost-effective alternative substrates, such as plastic, and support your material conversion. Contact your Packaging Consultant or call 1.800.2.BERLIN to learn more about our glass packaging and other capabilities and how we may be able to help you with your supply chain.

Aluminum

Reduced international demand for aluminum — some of it caused by coronavirus lockdowns in China — has driven aluminum rates lower, resulting in a decrease in the price of aluminum beverage cans and ends.

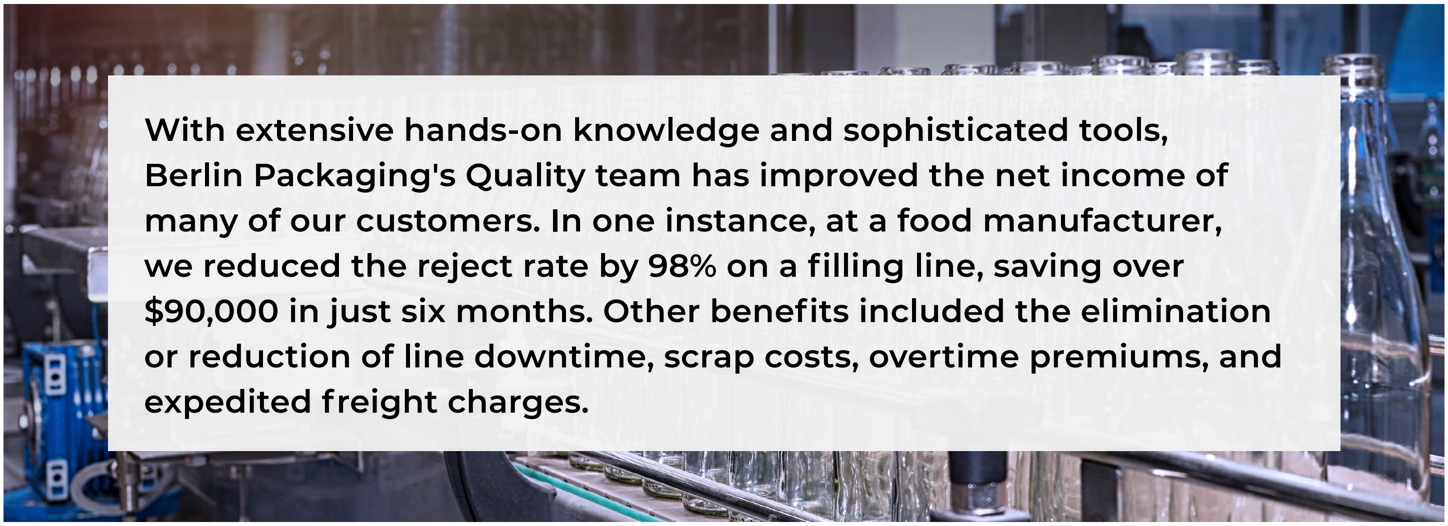
Steel

Steel prices have begun to decline as global production expands. In May, Chinese exports of finished steel hit a 12-month high as producers increased output to fill a supply gap caused by Russia invading Ukraine in February.

Pulp & Paper

The price of pulp, paper, corrugated, and allied products continues to increase due to greater demand for e-commerce packaging, sustainable packaging concerns, and higher freight and raw material costs.

Quality Advocacy



With extensive hands-on knowledge and sophisticated tools, Berlin Packaging's Quality team has improved the net income of many of our customers. In one instance, at a food manufacturer, we reduced the reject rate by 98% on a filling line, saving over $90,000 in just six months. Other benefits included the elimination or reduction of line downtime, scrap costs, overtime premiums, and expedited freight charges.

While quality has always been a top corporate priority, the pandemic and resulting supply chain disruptions have highlighted the critical need to get it right the first time. Sourcing product has become a huge challenge, and the cost of goods has skyrocketed. If a supplier's product is out-of-spec or has a defect, it's nearly impossible because of extended lead times to obtain replacement product promptly to avoid production downtime.

Quality is paramount for business success. Higher quality products drive repeat purchases and brand loyalty, premium pricing opportunities, prime retail shelf positioning, sales channel expansion, and enhanced company and brand reputations — leading to increased profits.

In contrast, poor quality can result in customer dissatisfaction and complaints, product rework and scrap, production interruptions to remake product, pricing discounts, product retesting, lost current or future business, and allowances and penalties — leading to profit erosion. According to the American Society for Quality, the cost of poor quality is estimated to be up to 20% of a company's revenue.

The most astute and successful companies recognize the importance of quality. According to a Berlin Packaging survey of more than 200 customers, "packaging quality" was rated the No. 1 criteria when selecting a supplier of rigid packaging, while "price" was ranked No. 5. Timeliness struck a loud chord with companies. "Reliable on-time delivery of product," "responsiveness of service," and "on-time delivery of information" ranked 2nd through 4th, respectively.

Packaging Quality

No. 1 Criteria

Price

No. 5 Criteria

Quality Advocacy

Quality Management System

“Getting it right the first time” and consistently delivering high-quality products and services is no accident. It requires a robust quality management system with leadership support and vision, a dedicated quality team, documented policies and processes, and measurement and goals.

Senior leadership must be a champion of quality, communicate its importance, characterize it as an investment rather than a cost, and build it into the company's vision and culture.

As trained professionals, the quality team proactively looks for ways to improve quality. They are responsible for process and document control, setting product specifications, standards, and inspection protocols, resolving and correcting nonconformity and defect issues, and auditing the supply chain. The team also ensures that quality is integral to everyone's job through training and education.

Measurement and goals are crucial for evaluating quality parameters and coupling quality results with financial, sales, and other key performance indicators. As part of our ISO 9001 certification at Berlin Packaging, we track three quality objectives:

1

On-Time Delivery

We measure shipments of product from our warehouses to our customers to ensure on-time delivery.

2

Product Quality

We strive to have at least 99.2% of product shipments meet all customer requirements and needs.

3

Strategic Planning Reviews

We meet with customers in formal business reviews to quantify the value and income we provide as a direct benefit of partnering with Berlin Packaging.

Quality Advocacy

Advocates for Quality and More

Berlin Packaging's customers come in all shapes and sizes across a broad spectrum of markets. For many of our customers who do not have the in-house knowledge or lack the proper resources, we are their quality advocates with packaging manufacturers. As a multi-billion dollar company, our sheer size and global partnerships with 1,700+ suppliers give our customers a seat at the table by elevating and voicing their quality issues and concerns.

In addition to resolving quality issues with manufacturers, Berlin Packaging's Quality team — with more than 100 years of combined experience — offers a range of services and capabilities: lean/waste reduction assessments, regulatory guidance on material usage, line evaluations and manufacturing process advice, root cause analysis, customer training, cGMP auditing of manufacturing and warehousing, independent testing, qualifying the performance of PCR resins, and more.

Berlin Packaging maintains several in-house laboratories around the globe for package testing. Lab testing capabilities include video microscope metrology, torque, leak, accelerated aging, ISTA drop, container vibration, induction seal, glass stress and fracture, ROPP application, metal coating and container wall thickness, and others.

As part of our culture of continuous improvement, we recently rolled out a web-based software platform that facilitates the global sharing of quality-related documents — nonconforming products, corrective action requests, supplier audits, ISO, etc. The platform, which replaces multiple systems with a more user-friendly and searchable interface, has enabled the rapid development and success of our environmental, health, and safety (EHS) program.

Ocean Freight

Berlin Packaging's global capabilities encompass sourcing, quality, design, and supply chain. Especially during inflationary times, it's essential to have a nimble packaging partner that will leave no stone unturned to find the best packaging solution for your business at the best overall cost.

Container capacity has increased on some trade lanes from Asia to North America, resulting in a temporary downturn in spot market rates. However, carriers are expected to continue to effectively balance supply and demand via blank (canceled) sailings to curb the decline in rates.

Trans-Atlantic lanes from Europe to North America are seeing increased demand and elevated freight rates with poor schedule reliability (< 20%) due to congestion at both East Coast and European ports. These conditions, which are impacting all Trans-Atlantic lanes and not just those originating in Europe, are expected to persist throughout the year.

North American forecasts for upcoming inbound demand are uncertain as we approach the peak season with back-to-school and end-of-year holiday orders. Many large retailers are burdened with excess inventories, which may reduce import demand. However, the National Retail Federation predicts import volume will increase 0.3% in the second half of 2022 compared to the same period last year.

Port Activity

Although the existing labor contract expired on June 30, negotiations for a new contract between the International Longshore and Warehouse Union and the Pacific Maritime Association are progressing. The union represents about 22,000 dockworkers at 29 ports along the West Coast. In a surprising joint statement, both groups said, “Neither party is preparing for a strike or a lockout.”

Container volume numbers for May continue to show strong demand for imports. The Port of Long Beach (LB) handled the second-highest monthly total of imported containers in its history, while the Port of Los Angeles (LA) processed 499,960 twenty-foot equivalent units (TEUs) of imports — 20% higher than the prior five-year average. Combined, import volumes for the first 5 months of the year at LA/LB are on par with 2021.

Ocean Freight

To help overcome global freight challenges, Berlin Packaging is utilizing its diverse supply base, expanding partnerships with trusted carriers, exploring alternative routing options to avoid known bottlenecks (where possible), and leveraging our size as an importer for more favorable rates and space reliability for 2022.

In May, several East Coast and Gulf Coast ports achieved record volumes. The Port of Savannah handled 519,390 TEUs, surpassing the previous monthly record in October 2021. The Port of Virginia processed more than 314,000 TEUs in May — the highest monthly volume in its history. The Port of Charleston posted its 15th consecutive month of record cargo in May.

Port Houston hit an all-time record in May for monthly container volumes, handling 335,000 TEUs — a 16% increase over the same period last year. Import volume hit 2.8 million tons — a 32% increase over May 2021.

Regulatory Changes

In June, President Joe Biden signed the Ocean Shipping Reform Act of 2022. The new law expands the authority of the Federal Maritime Commission (FMC) to address unfair business practices by ocean carriers and marine terminal operators. Key provisions include:

- Prohibiting ocean carriers from unreasonably declining shipping opportunities for U.S. exports.
- Adding oversight and scrutiny to the fairness of detention or demurrage fees charged by ocean carriers.
- Requiring ocean carriers to provide quarterly reports on total import/export tonnage and 20-foot equivalent units (loaded/empty) per vessel that use U.S. ports.

Most carriers have been shipping containers back overseas empty due to major delays on the import side, hurting U.S. exports. According to the American Farm Bureau, U.S. farmers have lost an estimated $25 billion in agricultural exports in the first half of 2022 because of these empty containers.

According to a two-year study conducted by the FMC on the impact of the pandemic on ocean shipping, the ocean freight market is competitive, and high ocean freight rates are the result of unprecedented consumer demand, primarily in the U.S., that overwhelmed the supply of vessel capacity.

Domestic Transportation

Berlin Packaging's commitment to managing costs and finding the most cost-effective packaging solutions ensures our customers maintain a competitive position in their respective marketplaces.

The good news: Transportation costs in North America are declining as carrier capacity is better balanced with freight demand, more truck driving jobs get filled, and inventory levels rise.
The bad news: Record-high prices for diesel fuel and rising carrier fuel surcharges are offsetting most of the decrease in transportation rates.

Although contracted rates have been lower than spot rates since the onset of the pandemic in early 2020, the transportation market has recently flipped because of the built-in fuel surcharges in contracted rates and the sharper drop in spot rates vs. contracted rates. In mid-June, line-haul costs per mile for dry van shipments were nearly 50 cents cheaper for spot rates compared to contracted rates.

The outlook for transportation costs in the second half of the year is difficult to predict, given the surging diesel fuel prices. Peak summer demand may put upward pressure on overall costs through Labor Day. However, some indicators point to a continued decline in rates. Freight demand is expected to ease as inflation is likely to reduce consumer spending on durable goods, retailers postpone or slow down orders due to sufficient inventories, and consumers continue to shift their spending from goods to services.

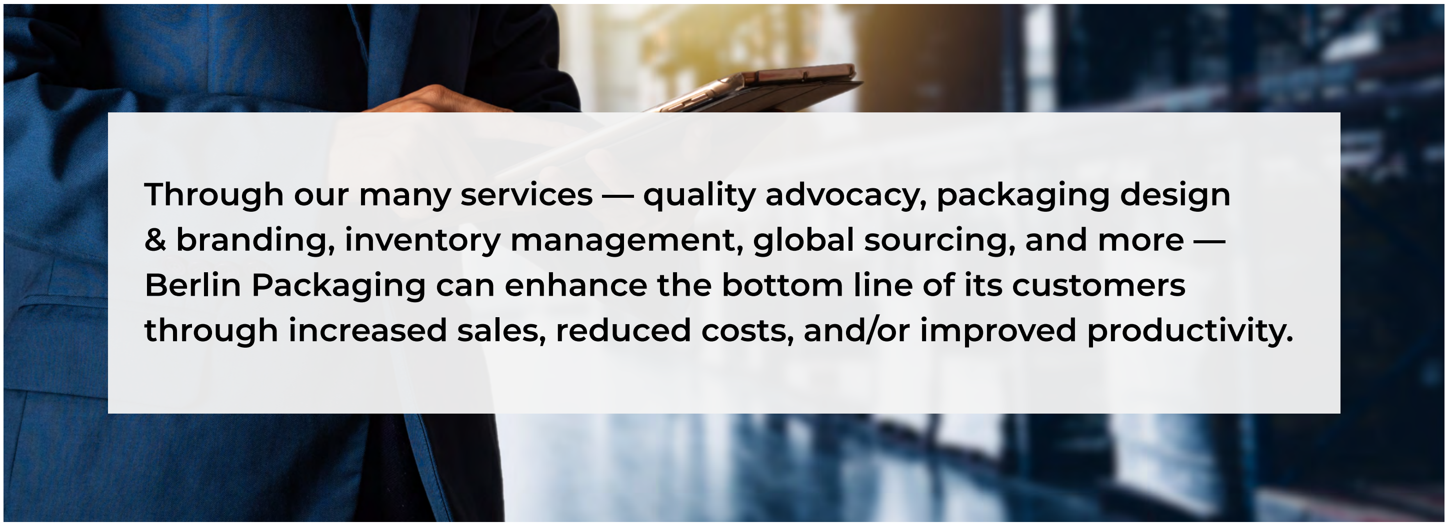
To date, the manufacturing and transportation slowdowns in China resulting from the pandemic lockdowns have not impacted domestic freight demand.

Truckload

Line-haul costs per mile for dry van spot market shipments continue to decrease — averaging $2.37 in mid-June and down from $2.96 in June 2021. Rates are highest in the Northeast ($2.66), followed by the Southeast ($2.44), West ($2.42), Midwest ($2.25), and Southwest ($2.21).

Van load-to-truck ratios — an indicator of demand (no. of loads) and capacity (no. of trucks available to carry those loads) — dropped below 4:1 in April. It had been above 4:1 since July 2020 and hit nearly 10:1 in January of this year. Lower ratios typically foreshadow a reduction in rates. The ratio rose above 4:1 in May and is expected to rise due to peak summer demand.

Domestic Transportation



Through our many services — quality advocacy, packaging design & branding, inventory management, global sourcing, and more — Berlin Packaging can enhance the bottom line of its customers through increased sales, reduced costs, and/or improved productivity.

In May, retail sales were down 0.3% from April but up 8.1% from May 2021. According to the National Retail Federation, retail sales slowed in May as consumers faced continuing inflation and higher prices for essentials like food and gasoline. Health and personal care store sales declined 0.2% month-over-month, furniture and home furnishings store sales dropped 0.9% month-over-month, and electronics and appliance store sales fell 1.3% month-over-month.

Large retailers, such as Walmart and Target, reported disappointing first-quarter results due to higher transportation costs and excess inventory. Amazon, Home Depot, Marshalls, and TJ Maxx are also experiencing a glut of inventory.

In mid-June, the average price for diesel fuel in the U.S. was $5.71 — an all-time record and $2.43 higher than one year ago.

Less-Than-Truckload (LTL)

Following 24 consecutive months of growth, U.S. manufacturing output and factory orders declined in June. Since LTL shipments usually follow manufacturing activity, LTL demand may begin to wane. LTL carriers continue to show growth in tonnage and shipments, but the gains appear to be slowing compared to the past 18 months.

Parcel

According to government data, U.S. retail e-commerce sales reached $250 billion in the first quarter of 2022 — an increase of 2.4% from the fourth quarter of 2021 and a 6.6% jump from the first quarter of 2021. Retail e-commerce sales in the first quarter of 2022 accounted for 14.3% of total retail sales. E-commerce sales as a percentage of total sales has held steady (13% to 15%) since the second quarter of 2020.

According to the Pitney Bowes Parcel Shipping Index, U.S. parcel volume grew 6% to reach 21.5 billion parcels in 2021. That number equates to 166 parcels shipped per household. The four largest parcel carriers — USPS, UPS, Amazon, and FedEx — accounted for 97% of the total volume.

PACKAGING

We Believe Anything is Possible®

With over 100 years in the packaging industry, more than 1,500 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

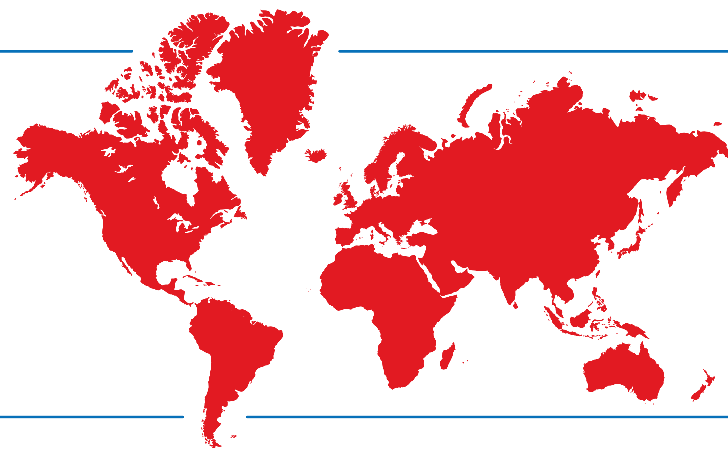
Berlin Packaging is not a distributor. We're not a manufacturer. And we're not a packaging consultancy. Instead, we're all three at the same time. We are best-of-breed amongst manufacturing, distribution, and value-added service providers. We are the world's largest global Hybrid Packaging Supplier.

Hybrid **Packaging** Supplier®

Best Elements of a Manufacturer + Distribution & Logistics + Value-Added Specialty Services

Global Capabilities

Our mission is to improve our customers' net income through packaging products and services. With 60+ locations on four continents and a network of suppliers around the world, we leverage our global scale and capabilities to further our mission – and bring unique value to customers of all sizes at the local level – where it matters.



Specialty Services

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

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

Operational Excellence

- ISO 9001 Certified
- 99% on-time delivery for 15+ years
- Dedicated Quality Service Division
- Industry-leading customer thrill scores
- Sustainability and safety focused

Visit our website or call the number below to be contacted by a Packaging Consultant.

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