PACKAGING STRATEGIES®

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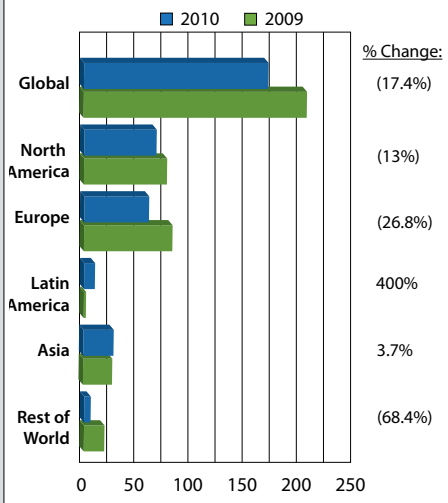
Sales Report

Packaging transactions, last 12 months



Source: BMO Capital Markets

IN THIS ISSUE

THE NEW LOOK OF PLASTICS PACKAGING

As **Amcor** prepares to integrate **Ball**'s plastics packaging business into its rigid plastics operations, two truths are self-evident from the $280mn transaction:

First, Ball officials made it clear that it wanted to focus attention on its metal cans business. Ball's plastics packaging operation, while only representing about 9% of sales at the Broomfield, CO-based converter, was frequently a drag on earnings that took attention from the metals side.

And secondly, while **Amcor Rigid Plastics**, Manchester, MI, will add a business with 12-month sales of $589mn -- almost 60% of that in carbonated soft drinks (CSD) and bottled water -- the transaction was not really about those commodity businesses.

Instead, Amcor ceo/managing director Ken MacKenzie said during a June 16 conference call from Melbourne, AU, that the deal was "really about expanding our Diversified Products business and… provide an opportunity for us to broaden our material substrates." MacKenzie was energized by the prospects of adding high-density polyethylene (HDPE) and polypropylene (PP) bottles to Amcor, as well as new coextrusion, multilayer, hot fill, and coating technologies.

Ball's plastic containers have include a barrier-coated bottle for MADE organic beverages and a panel-less Heat-Tek PET bottle for Elations.

In other words, the deal was symptomatic of a marketplace shift for rigid plastics packaging. While CSD and water remain the 800-pound gorillas of PET packaging, converters are realizing that more profit can be reaped from custom applications. That was also behind Amcor's previous purchase of **Alcan Packaging**'s plants, albeit on the flexibles end of the business.

Ball, meanwhile, will continue on its path of both pruning costs from its can plants (including shutting some facilities) and attempting to gain more favorable pricing terms in contract renewals, noted analyst Ghansham Panjabi of **R.W. Baird**.

Packaging Strategies' Perspective: *According to Panjabi and others, the sale of the plastics business was imminent and not surprising for a company focused on cans.* PS

2ND OPINION

The Credibility Problem with LCA Studies

"We continue to see conclusions of studies that contradict one another on the misguided question of which packaging is supposedly best for a product."
Julian Carroll, EUROPEN

Today's packaging is better than yesterday, and tomorrow's will be better than today's, chiefly because of healthy competition and the innovation it drives. This competition is constantly being played out between all actors up and down the supply chain from packaging material suppliers through to retailers. Everyone wants to be better than the other guy.

But in the challenge of trying to convince their customers that they are the top dog, some players are using tactics which neither help them or the credibility of our industry: Life Cycle Assessment (LCA). Some call it "material wars," others use more graphic descriptions, but no matter what expression we choose, it quickly becomes obvious on closer scrutiny that this is a phony war. I'm talking about the never-ending parade of studies purporting to "prove" superiority of one packaging option over its competitors.

Don't get me wrong: Properly used, LCA is a very useful management tool, provided that all the essential elements, such as those prescribed in the ISO Standards 14040-43, are respected before and during the study and the results are interpreted following the same standards. These standards cover topics such as study transparency, its scope, objectives, critical review, system boundaries, and the functional unit to be assessed. Quality of data used, the energy model, and the choice of impact categories to be measured are also vital to a credible study.

The problem is that while all these prescribed norms are usually respected, we continue to see conclusions of studies quoted that contradict one another on the misguided question of which packaging is supposedly best for a product. Scratch beneath the surface and most times it will be found that instead of comparing apples with apples, it turns out it the comparison attempted was apples with pears.

This then begs the question of whether these studies are really useful for packaging decision makers. Those who decide how their products will be packaged know very well the uncertainties surrounding such studies. It is very doubtful that they are persuaded by their findings. So who are we satisfying besides the (probably) well-paid LCA consultant and the marketing folks from the company or sector that commissioned the study?

It is one thing when these types of study results are used for business-to-business communication. But when they are directed towards consumers, we risk doing real damage to our reputation. By confusing consumers with conflicting messages about the virtues of one type of packaging over another, our industry's credibility suffers.

Surely it's time for consumer goods manufacturers to send a message back up the supply chain: Please stop the "material wars". PS

For guidance on Life Cycle Assessment for packaging chain companies, see: Life-Cycle Assessment: Guidance for Packaging Chain Companies.

Julian Carroll is managing director of the ***European Organization for Packaging and the Environment*** *(EUROPEN).*

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THE ORGANIC PACKAGE: STEELCASE STARTS MOVEMENT TOWARD POLYMER REPLACEMENT

It may seem like weird science to some but the move to organic materials instead of chemically derived polymers continues to gain momentum among brand owners.

Steelcase, the large contract office furnishings producer, has become a surprise leader in that market shift. The Grand Rapids, MI-based company has partnered with **Ecovative Design**, a material science company in Green Island, NY, that is producing a packaging material made from naturally occurring waste products such as buckwheat, rice, or cottonseed hulls and mushroom roots.

The result is a molded protective package called *EcoCradle* that company officials say is "grown" instead of manufactured. In a system developed in 2007 by two recent graduates of **Rensselaer Polytechnic Institute** (RPI), Eben Bayer and Gavin McIntyre, fungal mycelium, an enzyme found in mushroom roots, is used as a bonding agent with agricultural byproducts to form an insulating material.

The material is then molded into a shape and is ready for use as a protective shell for a product. But a bit of a challenge has been scale. "As we worked through this, we wondered how we would scale up and get to the point of actually providing several thousand a month," said Dennis Carlson, manager of packaging and logistics for North America with Steelcase.

Steelcase helped Ecovative develop the material over the course of more than a year, putting it through a series of durability tests and developing parts geometries, Carlson said. It is now offering the first commercial launch of *EcoCradle* -- for Steelcase's ready-to-assemble laminate casegoods.

Initially, the company will distribute 5,000 to 7,000 packaged parts per month with the material, Carlson said. But that number could eventually run to tens of thousands, he added.

The packaging requires little energy -- about one-tenth that of traditional production processes -- to produce since the material is grown and not manufactured. Moreover, the company claims that the materials are completely compostable, returning nutrients to the soil in 30 to 45 days.

Doing that will require a series of regional growing centers that can ship packages short distances. But since the "grow houses" are not energy or labor intensive, they are relatively cost-efficient to start. The current Steelcase shipments will come from Ecovative's Green Island headquarters.

Steelcase has been moving away from expanded polystyrene (EPS) protective materials for three years for performance and environmental reasons, Carlson said. But while other foam materials have worked well,

Steelcase will use a protective package made from agricultural byproducts and bonded with mushroom roots.

the company has some concerns about extended producer responsibility (EPR) and the looming need for brand owners to pay to dispose of waste.

"If we use a totally organic packaging element in the field that decomposes in 30 or 45 days, we contribute a positive influence on the triple bottom line," he said.

Packaging Strategies' Perspective: *Steelcase joins other organic-material initiatives that now include the use of bamboo packaging by* ***Dell*** *and* ***Coca-Cola****'s PlantBottle. While Carlson said the use of organic materials will likely never completely replace polymers, its use is mushrooming at an impressive pace.* PS

2nd OPINION blog

Click on the question here to blog your responses.

What promise does organic-based packaging hold as a replacement for plastic and petroleum-derived materials?

You can also visit us on Facebook & Twitter to answer the blog question

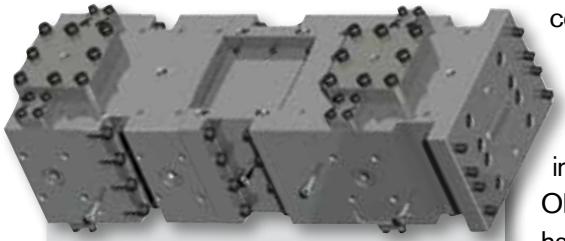
LAYER CAKE: EDI DEVELOPS MULTIPLIER TOOL TO PROLONG SHELF LIFE OF FOOD PACKAGES

Extrusion Dies Industries (EDI) has developed layer multiplier technology for thick film and sheet that prolongs shelf life by dividing the barrier material into thinner, micro-sized layers during production.

The company has refined its unique process at its Chippewa Falls, WI, Technology Center, using a special multiplier tool -- a compact piece of equipment only 24 inches long -- that creates multiple barrier resin layers in a package structure. In layer multiplication, materials from two or more extruders are multiplied into microlayers as small as 4 microns thick.

The production of the smaller layers offers a short, streamlined flow path that reduces the residence time of the polymer in the system and can lower oxygen transmission rates (OTR) by 60 to 80%, said Gary D. Oliver, EDI vp of technology.

The reduction in oxygen ingress prolongs package shelf life over an extended period and opens opportunities to save costs by downgauging film or using less costly food ingredients, Oliver said. EDI has performed application development work in thick film and sheet for thermoformed cups and trays, standup pouches, and vacuum skin packaging for meat and expects commercial use in those areas, he added.



EDI is offering a multiplier tool that can divide barrier layers during the extrusion process.

A process from EDI can multiply layers of EVOH to prolong the shelf life of food containers.

The use of layer multiplier technology first began years ago under a **U.S. Defense Dept.** contract for developing longer-shelf-life food containers for the military, Oliver said. The process has been perfected for high-barrier trays and heat-sealed lids for *Unitized Group Rations* (UGRs), entrees that can be heated onsite during military operations, Oliver noted.

In testing done at EDI's Wisconsin labs, the EVOH barrier core layer for sheet used in single-portion retort cups was tested, with as many as 16 EVOH layers created through multiplication. The original EVOH layer exhibited an OTR three to six times higher than that of an EVOH layer that was multiplied.

Packaging Strategies' Perspective: *This new barrier technology shows promise in both thermoformed food containers and vacuum skin packaging, where extended shelf life is essential but so is minimizing cost.* PS

PACKAGING VENDORS CALL ON MULTIMEDIA-ENABLED BAR CODES

With social media accelerating and pulling consumer-product interaction along with it, it's little wonder that vendors are following the action. To that end, **Innovative Labeling Solutions** (ILS) has added Quick Response (QR) code printing capabilities to its digital label and packaging portfolio.

"We view the product package as an optimal vehicle to deliver QR code technology to the marketplace," states Kathy Popovich, director of marketing and communications for ILS. "Consumers have come to expect a level of connectivity and intimacy with brands that is being driven primarily by social media platforms. The QR code is the next iteration of this."

When the printed 2D code is scanned, using a *SmartPhone* or web cam, it launches dynamic content on the Internet via embedded URL. Consumers can instantly view videos, extended content, newsletters, recipes, coupons, or **Facebook** pages in the aisle.

The use of QR shifts a brand's messaging from one-way to two-way, with the added benefit of robust data collection capability to capture consumer information.

According to ILS, 95% of all phones offer Internet access while 42% of consumers have used a *SmartPhone* to get product information in the store.

"There's an overall trend to have packaging perform more of the work for brands," Popovich said. The technology attracts multimedia-savvy Generation X and Gen Y consumers if that's a major target for the brand owner.

ILS continued on the bottom of Page 5

DAYGLO LAUNCHES BRAND INITIATIVE TO ADD SOME COLOR TO PACKAGE DESIGN

DayGlo Color Corp. plans to gain a more vivid presence with its packaging customers by launching a new brand action team that plans to bring specialty color into the early development discussion.

The Cleveland-based company has created a new branding group -- featuring a cross-section of DayGlo professionals from different departments -- that will offer a stronger and more direct presence with package designers, brand managers, and converters during all stages from package iteration to production.

DayGlo is launching an interactive design center for packaging on its revamped Web site.

The company also has revamped its Web site, www.DayGlo.com, to offer an interactive design center to engage package designers. The site features multiple iterations of its color palette, showcasing such options as fluorescents or phosphorescent, glow-in-the-dark effects. The site includes the manipulation of colors against a three-dimensional object and allows manual rotation and views against either a white or black background. The site launched June 28.

The new campaign centers on DayGlo's message, "Color, Only Better." The goal is to make the crafting of specialty colors and effects a key factor in package development, while building awareness of how color affects package shelf appeal and differentiation, said Kevin Sonby, DayGlo vp of marketing, in an interview at DayGlo headquarters.

"This is more than just introducing such areas as fluorescent and pearlescent colors to packaging," Sonby said. "This is a way to refresh the brand through the use of color choices."

The company's packaging "palette" could also be expanding soon. DayGlo is awaiting approval from the **U.S. Food & Drug Administration** (FDA) to use more of its colors in food and cosmetics packaging, said Wayne Likavec, DayGlo product development and quality control manager. The FDA is expected to respond within the next few months, after DayGlo provided evidence that its colors would not infiltrate package contents.

In a tour of DayGlo's color lab, the company showed off its chemical analysis tools that have allowed it to extensively test fluorescent and other specialty additives for use in packaging. The lab has the ability to test outside samples from customers for use in specific packages and applications, a role that its brand action team will help facilitate.

In general, the company believes that next-generation packaging can be improved by an expansion of color choices that help advertise the brand, Sonby said. Those include *Gem-Tone*, FDA-approved polymeric colorants for clarified polypropylene that can be combined to create a broad spectrum of choices.

Packaging Strategies' Perspective: *As packaging continues to play a prominent role in early product development, color and graphics will also surface as key aspects. DayGlo is riding this trend by expanding its package branding work and is banking that designers will take notice.* PS

ILS continued from the bottom of Page 4

She believes organic foods are a natural market for QR, reducing or replacing the need for extended content labeling (ECL). An ECL add-on flies in the face of such products' authenticity and overall environmental messaging in an often careful choice of package, opined Popovich. It can also provide transparency for consumers interested in crucial aspects including chain-of-custody information.

Although some *SmartPhone* applications permit the scanning of UPC codes, that familiar code permits little interaction. However, Popovich said recent industry discussions regarding the next generation of the UPC may address that issue. Also, there may be a way to marry the QR and UPC codes, she added.

Packaging Strategies' Perspective: *The QR market is heating up. One indicator: Microsoft has introduced the MS Tag, a proprietary, but free downloadable reader that permits the printed bar code to be an icon, a shape, or a color. Popovich believes it has potential as the next iteration for QR.* PS

Using a reader-equipped SmartPhone, a 2D bar code can open up an instant Quick Response (QR) virtual world of two-way interaction with consumers that brand owners love.

TAKING THE TEMPERATURE: PHASE-CHANGE MATERIALS GET BOOST FROM PURCHASE

The packaging of life sciences products, and the struggle to ship products at constant temperatures, could gain a boost from a new merger of technology and package.

On June 21, **ThermoSafe Brands** acquired *GREENBOX*, a shipping system from **Entropy Solutions** that uses a pioneering phase-change technology to maintain narrow temperature ranges within a package. Minneapolis-based Entropy, launched in 2003, developed *Pure Temp* phase-change material (PCM) from vegetable-based fats and oils that can be added to a package substrate.

GREENBOX packages use phase-change materials to maintain temperatures during shipping.

The materials absorb heat as temperatures rise and the material melts, until the PCMs reach their liquid phase at a specific temperature. When the temperature begins to fall, the encapsulated PCMs again solidify and release latent heat.

The PCMs, specifically devised to melt at a certain temperature point, have been incorporated into Entropy's *GREENBOX* shipping packages. The boxes have been launched for healthcare applications for life-saving drugs, used by **Walmart Specialty Pharmacy**, **Abbott Laboratories**, and the **American Red Cross**, among others.

The use of renewable materials by Entropy has garnered recent awards, including the Diamond honor at the **DuPont Awards for Packaging Innovation**, its highest recognition. That global notice attracted Arlington Heights, IL-based ThermoSafe, a unit of **Tegrant Corp.** and a producer of life sciences and industrial shipping containers.

Besides purchasing *GREENBOX* from Entropy and increasing the manufacturing and distribution platform, ThermoSafe will work on technology development with Entropy, said Entropy Solutions ceo Eric Lindquist in an interview with **Packaging Strategies**. ThermoSafe will use the PCMs in its current expanded polystyrene (EPS) or polyurethane shipping containers for temperature-controlled shipments.

"When we developed phase change materials, we looked for a platform that could display what the technology and the renewable materials could do," he said. "Temperature sensitive packaging made a lot of sense."

Packaging Strategies' Perspective: *ThermoSafe's purchase of GREENBOX could catapult PCMs into broader offerings. While other iterations of PCMS use water or rock, the use of the fats and oils sets this technology apart.* PS

MVR'S ROADMAP TO RECYCLED RESINS STARTS WITH POLYPROPYLENE, POLYSTYRENE

Mountain Valley Recycling (MVR)'s path into food-grade resin recycling is the one less traveled. Instead of joining the rest of the pack turning post-consumer PET into recycled PET (rPET), the Boca Raton, FL, company is looking toward reuse of overlooked resins.

Its journey starts with polypropylene (PP) and polystyrene (PS), which have recently received a nonobjection ruling from the **U.S. Food and Drug Administration** (FDA) for contact with non-alcoholic foods in thermoformed or injection molded items. Derived from post-consumer materials, the resins are cleared at levels up to 100 % recycled content and with performance qualities comparable to virgin resins.

MVR is already planning to branch out into other underutilized polymers.

"Instead of pulling oil out of the ground, our intent is to prevent waste from being put back into the ground." Ron Whaley, Mountain Valley Recycling

MVR also took a different route on its approach -- rather than seeking approval for a specific product, MVR seeks approval for its process. Ron Whaley, president and CEO, believes that potentially makes the path to gain FDA acceptance for additional resins a shorter one.

It's not an easy path, but one that he feels is the right one. "The focus is to create sustainable resins out of plastic waste," Whaley said. "Our niche will be in a broad range of resins, modeled after the large chemical companies. Instead of pulling oil out of the ground, our intent is to prevent waste from being put back into the ground. PS and PP are the first of several resins -- and next will be a whole breed of polyethylene."

MVR continued on the bottom of Page 7

HOSOKAWA YOKO'S SLEEVE-IN-POUCH HOPES TO PENETRATE NORTH AMERICAN MARKET

Is now the time for **Hosokawa Yoko**'s sleeve-in-pouch (SIP) system to make headway in the North American market?

The company, one of the most prominent global converters of specialty film, hinted at the **2010 Global Pouch Forum** that new equipment could spark more international interest, especially in the United States. The system -- a combination of a flexible and paper package -- is now being strategically deployed to the U.S. market.

One of Hosokawa Yoko's proprietary designs from its U.S. patent.

Toru Ichikawa, managing director of the Japanese company, said a recent in-line machine was jointly developed with **Tokyo Automatic Machinery Works** that assembles the roll-fed film, sheet paper (or plastic sheet, if needed), and zipper tape. The package is formed and pieces shaped, filled, and sealed, in the compact unit. Deliveries of the equipment began in the last fiscal year, and inquiries are now being received by potential global customers.

"Customers can make use of SIP with a sense of security," Ichikawa said. "It is proprietary in the United States, Europe, and Asia, including China."

SIP, which Tokyo-based Hosokawa Yoko has called "the world's first stackable stand-up pouch," first wowed North American audiences at the **2002 Pack Expo**. The package is made of film but looks like a folding carton and includes a paperboard liner laminated to the pouch's interior walls. The package features an easy-to-open, recloseable zipper and a stiff structure for a film-based pouch that can stand and be stacked.

Unilever Japan has used the SIP for a decade as a substitute for a folding carton for *Lipton* tea bags, Ichikawa said. The company was able to expand sales by 6 to 8% annually by making it distinctly different from its competitor's containers.

"SIP can be used as a substitute for other containers, such as plastic containers, metal cans, and spiral containers," add Hosokawa Yoko global director Kenji Nagata at the Global Pouch Forum.

Packaging Strategies' Perspective: *The SIP represents a novel combination of paper and plastic, of carton and pouch, and of paperboard and film. While a success in Japan, it may be time to penetrate the U.S. market.* PS

The sleeve-in-pouch features stackability and a vivid graphic presentation in a sustainable package.

MVR continued from the bottom of Page 6

Those would include recycled linear low-density polyethylene, LDPE and high-density PE, all of which are more of a challenge to reprocess into food-grade quality resin than others.

"A lot of those in the industry consider PE a 'dirty resin' in that it tends to attract chemicals it is exposed to," he explained. "That means our washing, sorting…our whole process has to be more sophisticated than what it is for PP and PS." MVR has equipment due to arrive in the next 90 days that will position the company to demonstrate to the FDA that its process removes contaminants before the PE is remade into resin.

"There's tremendous interest from molders, thermoformers, and Top 100 consumer packaged goods companies," said Whaley. He expects the first introduction to be as soon as this summer for a major packaged goods company in which both the product and the packaging will be made from 100% recycled PP.

Resin costs will be -- and need to be -- competitive with virgin, he said.

The company is quickly ramping up production: In addition to its operations in Tennessee, it has opened up a 225,000-square-foot facility in Frankfort, KY, that can produce 90mn pounds of resin yearly. MVR is also in conversations to establish similar facilities in other states.

Packaging Strategies' Perspective: *Rather than carrying a premium price tag, it's crucial for recycled resin costs and the final sticker price to be on parity with packaging using virgin materials. As MVR's Whaley stated, "If a packaged product on shelf looks the same, performs the same, and costs the same, consumers will buy the 'green' product."* PS

STREET TALK: INTELLIGENCE FOR THE INFORMED PACKAGING EXECUTIVE

Exopack Buys Bemis Facilities

What has been **Bemis**'s loss, due to a court order asking it to divest two facilities, has become **Exopack**'s gain.

Spartanburg, SC-based Exopack has agreed to purchase Bemis flexible packaging plants in Menasha, WI, and Catoosa, OK, that produce wrappings for natural cheese and shrink bags for fresh red meat. Those facilities, under brand names *Halo*, *ClearShield*, and *Maraflex*, are among industry leaders for meat and cheese packaging and use advanced barrier materials.

Exopack won an FPA award in March for a PFOA-free microwave popcorn bag

Bemis was forced to shed those plants as part of its acquisition of **Alcan Packaging Food Americas** earlier this year, due to an order from the U.S. District Court for the District of Columbia that stems from concerns over monopoly issues. Terms of the agreement were not disclosed.

The agreement, which includes production equipment, gives Exopack continued name recognition and strength for its package offerings and brands, even if it means that Bemis loses some of its proprietary packaging to a market competitor. Interesting times all around on the packaging acquisitions front. PS

Recovery Program for Bottled Water

For indications that extended producer responsibility (EPR) is becoming a reality in North America, look no further than the **International Bottled Water Association** (IBWA).

On June 11, the Alexandria, VA-based group established a framework for a "Material Recovery Program" that will allow consumer packaged goods (CPG) companies to work with state and local governments. Among the initiatives are the creation of recycling goals in specific communities and the funding of local government recycling infrastructure improvements and education programs.

The bottled water industry is looking for recovery solutions with communities.

But a telling sign of tailwinds to come is the idea that IBWA wants to generate revenues for grants that can help with responsibility fees. There is growing concern that state and local municipalities will ask CPGs to pay to recover the bottles that are used.

IBWA vp of communications Tom Lauria said the next step is to gain a critical mass of bottled-water companies to support the action program and test this in communities. "We'll start getting a little meat on our bones" now that the plan has been developed, he said. PS

Rooting for Cheer Pack

CDF Corp. has started an expansion of its manufacturing footprint in North America, a signal that it will move aggressively to grow its *Cheer Pack* spouted pouch and *Cheertainer* bag-in-box packaging.

Cheer Pack, first unveiled by **Hosokawa Yoko** in 1990, has been a major seller in Japan and in Europe, where it is manufactured by the **Guala Group**. But with **Cheer Pack North America** formally launching, more investment in building a North American market has been close behind.

Cheer Pack North America hopes to advance the spouted pouch on this continent.

The new, 109,000 square-foot facility, purchased by CDF, is located in Plymouth, MA. In conjunction with the expansion, Hokokawa Yoko and the Guala Group have partnered to create Cheer Pack North America and develop spouted pouch technology in North America. PS

Clarification

A story on Page 3 of the June 15 issue should have said that **Avery Dennison** is targeting growth of 5 to 7% in FY2010.

As per our annual custom, **Packaging Strategies** will not publish an issue on July 15. We will return with regular coverage on July 30.

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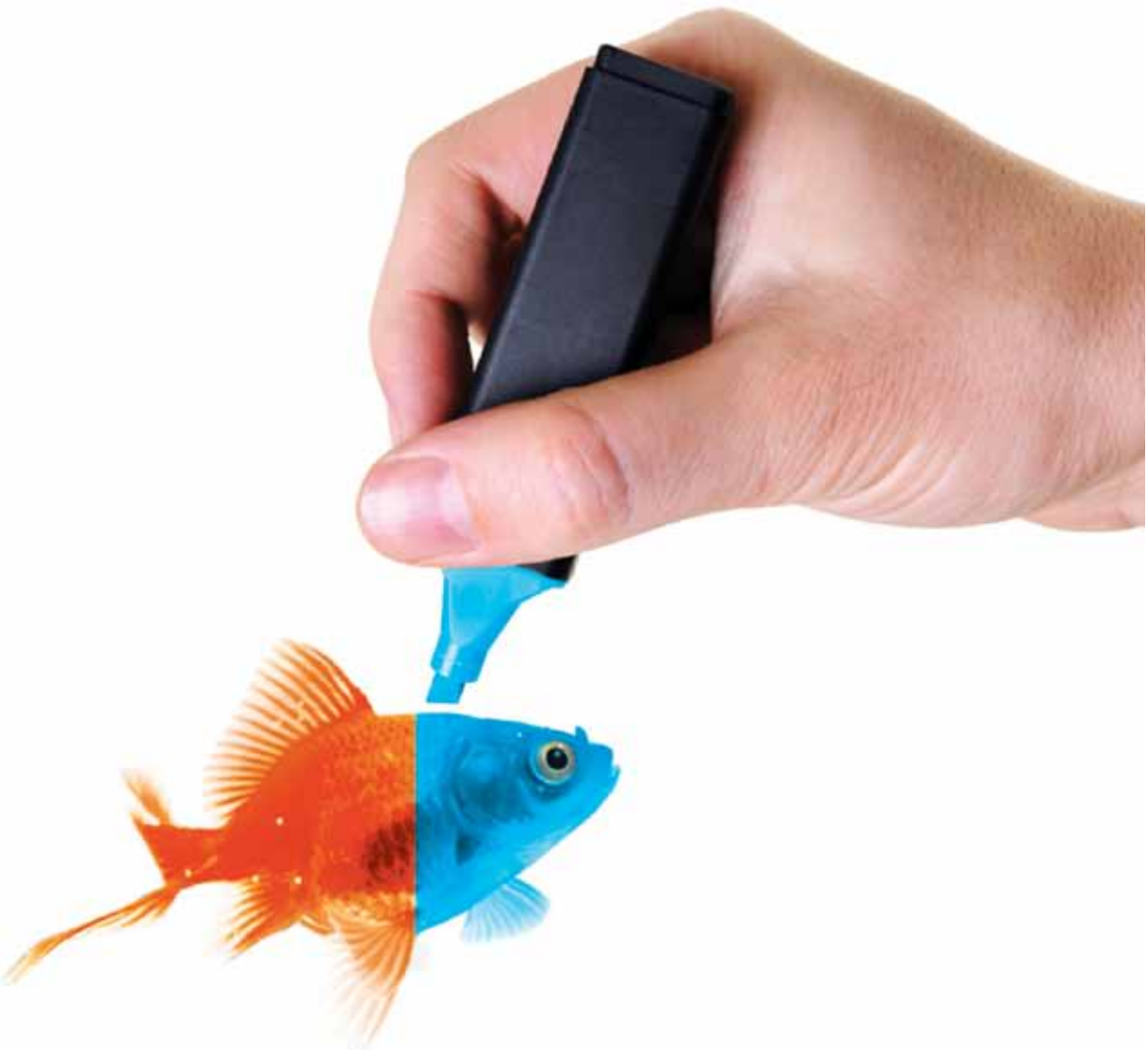

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Packaging Thermoforming in the New Normal Economy

A Market Study and Desktop Reference

The global plastics industry has enjoyed an average annual resin demand growth rate of 9% since 1950. Then along came "The Great Recession" creating adverse market conditions for plastic processors in 2008 and 2009. So what does the future hold for North American thermoformers in 2010 and beyond?

The **2010 Packaging Thermoforming in the New Normal Economy** delves into the market outlook for thermoformed packaging and outlines the challenges and opportunities in today's economic climate. This comprehensive resource contains unique perspectives gathered from personal interviews with dozens of thermoformers…inside intelligence that can't be found anywhere else:

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- Market overview including company size and annual sales
- 52 detailed profiles of packaging thermoformers

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- Brand Owners
- Packaging converters
- Thermoformers
- Co-packers
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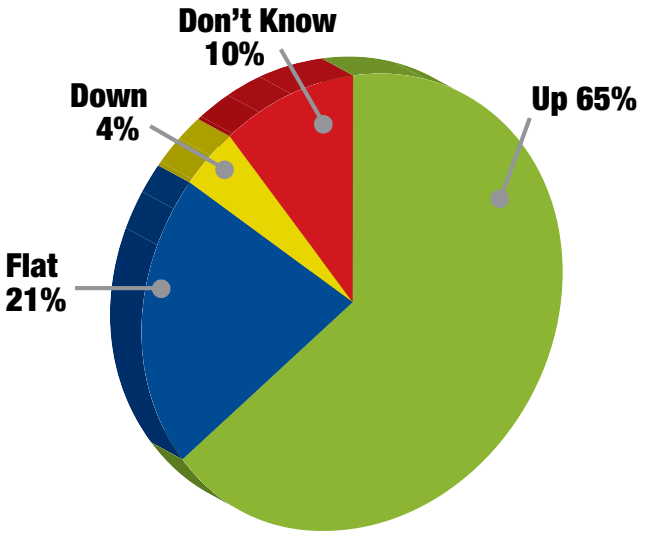
Projected 2010 Sales Growth Among Packaging Thermoformers



Source: Packaging Thermoforming in the New Normal Economy

About the Author

PCRS

Plastics Custom Research Services (PCRS) and economist Peter Mooney have been tracking the thermoforming industry since 2002. PCRS is a top supplier of technical/economic market research devoted to the evolving domestic and global plastics industry. PCRS researches and publishes multi-client reports covering issues of critical importance to plastics processors, as well as the companies on their material and machinery supply chain. PCRS also designs and executes customized single-client market research programs that provide cost-effective and compelling market intelligence to plastics industry participants engaged in periodic strategic planning.

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