

Security that Embraces the ENVIRONMENT



In addition to protecting the product, security packaging now needs to be sustainable.

By Sean Riley

While security packaging of one form or another is hardly new, it has recently grown to the point that almost every consumer product has a level of security at either the primary or secondary level of packaging. This security could be as simple as a tamper evident strip on a box of cereal, as common as a thermoformed clamshell on a razor or as complex as a color-shifting label on a box of Viagra®.

In the 25-plus years since Sony released the world's first Compact Disc player, the individual CD package has experienced a myriad of security changes in packaging design and size, encompassing a variety of solutions. When looking back at the evolution of its package, it wouldn't be too much of a stretch to compare the changes—albeit loosely—with the progression of security packaging in North America.

Originally, the 5.50 in. x 4.75 in. disc and jewel case were packaged in large cardboard

boxes appropriately called long boxes. These packages could be viewed one of two ways: as a large billboard for the album cover—or more accurately—as a deterrent from thieves looking to stash the relatively small, but expensive discs in a pocket or bag. This form of security packaging was not a good example of environmentally friendly packaging as the boxes were judged by the consumer as excess packaging.

Enter the reusable plastic frames that often contained security detection strips inside. This allowed the CD to be more environmentally friendly initially, while maintaining a larger and harder to pilfer product. Store clerks usually removed the frames, but in some cases they required the consumers to cut it off themselves when they arrived home. (Although not documented, this may have marked the start of “wrap rage” entering the consumer conscious.) In both cases—whether removed in store or at home—the frames eventually ended up in the garbage, creating additional waste.



Many retail outlets continued to use the reusable plastic frames, but those looking to utilize store and warehouse space better began inserting security tags in the CD's overwrap. As an additional form of defense, the jewel cases were tabbed with difficult-to-open—and thus difficult to pilfer—tamper evident tabs. For the savvy thieves who figured ways to beat security tags—and later for clubstore tray pack displays—Consumer Packaged Goods (CPGs) companies began thermoforming clamshells around CDs, DVDs and video games.

The following are some examples of similar packaging to the styles used to secure CD packaging through the years, with one caveat. Each of the solutions provides security that is more environmentally friendly and thus more sustainable.

SHRINKING WITHOUT SHRINKAGE

Seiko Epson, Suwa Suwa, Japan, has long been a top-ten player in the office and printer supply industry with over \$13 million in annual revenue. Known for its Epson printers, the Long Beach, Calif. North American headquarters was looking for a way to reduce the package size of its consumer ink cartridges. Already secured with sensor tags, and in some cases clamshells, the secondary package was simply deemed too large a package for the product—just like the long box two decades earlier. While Epson wanted to reduce material costs and maximize shelf-efficiency, the real driver was environmental and growing sustainability concerns.

"[Epson's] trend is definitely toward more compact, more efficient, more green-friendly packaging," says Jack Oleksinski, Epson product marketing manager for supplies.

One of the questions Epson had with a smaller package was whether or not it could maintain protection of the product in a retail environment. They turned to xpedx, Loveland, Ohio, which determined that packing material used to protect the actual ink cartridge was excessive and could be eliminated without affecting pilferage. At the same time, xpedx had to meet Epson's wishes to ensure that the ink cartridge contained the same amount of ink.

"That was an area that yielded a significant reduction in resources and waste," Oleksinski explains. "With the new design, the box serves as its own shock absorber, so no additional protection was needed."

Input from xpedx on streamlining Epson's supply chain helped achieve a production-run package in less than 18 months. The package maintained a superior level of protection with 63 percent less material and reduced waste and costs through source reduction.

OVERWRAPPING/SHRINK BANDING

In most instances, overwrap has acted as a vehicle for attaching additional security tags etc. to a product—like a CD. From a sustainability standpoint, new material for overwrap would be considered ahead of the curve as NatureWorks PLA (polylactic acid), Minnetonka, Minn., used items like CDs as its initial guinea pigs for biopolymer based films.

Tamper evident security banding has become the next logical step for sustainable materials due to its similar film characteristics. For example, PDC International Corporation recently released its PDC R Series Shrinkbander, and while the Norfolk, Conn.-based shrink sleeve and shrink band machinery manufacturer touts the machine's best in class line speeds, it also is quick to indicate its compatibility with all petroleum-based and sustainable films. PDC actually acted as a beta sight for Plastic Supplier's initial attempts to incorporate PLA into tamper evident neckbands and shrink labels. The Columbus, Ohio-based film supplier—through its PolyFlex manufacturing facility—was one of the earliest film suppliers to embrace NatureWorks biopolymers and convert it to PLA.

"[PDC] is neutral when it comes to any association with specific film suppliers, so we were involved very early with incorporating PLA into products that could run on our machinery," says Rich Keenan, sales manager for PDC. "One of the added benefits from a sustainability standpoint is that PLA does not require as much heat when applying to a bottle or container. [Less] energy is needed [for PLA] versus PVC or PET."

The early relationship between PDC and Plastic Suppliers has led to two prominent food customers who are currently incorporating the neck banders and shrink labelers onto their product line.

The end result is a tamper evident seal—in this case as a neckband for bottles—that is environmentally friendly.

Other labelers—like Fulleton, Calif.-based Label-Aire—have been fortunate to determine after the fact that their machines are also able to convert sustainable films into tamper and security applications.

"Label-Aire's entire line of pressure-sensitive labeling equipment, including our new Sleever Series Model 8500 Labeling System can handle sustainable materials," says Senior Marketing Manager William Claproth. "It's basically an added bonus."

CUTTING DOWN ON CLAMS

The clamshell has become a necessary evil of sorts for CPGs. Retailers need the protection and security clamshells provide, but consumers loathe the thermoform and conservationists are hardly in love with the land-filling properties of discarded clamshells.

A report this past summer from Consumer Network, Philadelphia, Pa., indicates that consumers—young and old—are switching brands or avoiding purchasing hard-to-open packages altogether. The survey of nearly 2,500 adults reveals the avoidance of hard-to-open packages by mothers with young children; women under age 35 who say they are "convenience-oriented"; and older men and women.

CPG companies, from the largest like Procter & Gamble to some upstarts like Shure Personal Audio, are beginning to notice.

P&G Gillette's Bob Collins is the director of global package development for blades and razors and his department saw a change in the size of its clamshells for razors as a "win-win."

Initially the Boston, Mass.-based healthcare goods provider aimed to make its clamshells easier to open and more environmentally friendly with smaller thermoforms combined with tear-proof paperboard.

"P&G needed to ensure that the second moment of truth (the moment when the consumer brings the package home and attempts to open and use it) was as pleasant as the initial in-store moment," he says. "We also needed to



Shure moved from a full size clamshell to a fold over blister incorporating Blisterguard® material.

continue to prevent shrinkage."

Additionally, the multinational company needed to increase its sustainability to maintain its good corporate citizen status.

Fortunately for Collins and his group, they were able to create a smaller package that is able to run on the same exact machinery (no capital investment) as well as fill the same size footprint for its allotted space in club stores.

Shure, Niles, Ill., did a similar redesign with its Music Phone Adapter, working with Creative Director Chuck Miller from Combined Technologies Inc. (CTI), Lake Forest, Ill. Miller and CTI recommended moving from a full size clamshell to a fold over blister that incorporates Blisterguard® material. (Blisterguard is a new pilfer-proof board stock that is very difficult to tear.)

"This design keeps the product tamper resistant which is good for retailer, allows the consumer to see the entire product and maintains the integrity of the graphics and brand equity," says Miller. The new design, which won the 2007 PACK EXPO *Selects*™ Program, greatly reduces the number of parts necessary for packaging, eases fulfillment, reduces cost and offers increased sustainability.

Although not necessarily a testament to the current state of society, pilfering and good old-fashioned shoplifting are not problems that are going to be eradicated any time soon. Consumer products need to be secure to deter theft and keep prices from sky-rocketing due to shrinkage. The paradox lies in providing stout protection that won't end up lying in a landfill for decades to come—long after its days of securing a package have come and gone. **PMT**

Sean Riley is the editor of *PMT*.

THE SUSTAINABLE SHELL

In an effort to kill two birds with one stone, Winterborne, Inc. Chatsworth, Calif., has created EnviroShell, an environmentally sustainable alternative to traditional PVC and PET blister and clamshell packaging. At PACK EXPO Las Vegas, in a joint effort with EnviroShell™ Sealing Machine manufacturer Sencorp, Winterborne unveiled a new EnviroShell Shuttle sealer machine. Specifically engineered to handle sustainable packaging materials, the EnviroShell Shuttle sealer can heat seal corrugated board-to-board faster than any other sealer on the market and is designed to handle sustainable plastics, two different package configurations at the same time, and warehouse club-sized packaging at 50 percent faster throughput than comparable machines.

Wal-Mart, Bentonville, Ark. has identified the EnviroShell material as an ideal solution for its suppliers.