

# Anti-counterfeit and Security Solutions for Secondary Packaging

The growth of global counterfeiting has risen rapidly in the 21st century and accounts for more than 3% of world trade, or over \$500 Billion USD. While the topic of counterfeit products may first call to mind Rolex watches or Gucci purses, the fact is, fake drugs represent a multi-billion-dollar global market. Why? Follow the money. Counterfeit pharmaceuticals are the most lucrative sector of the global trade in illegally copied goods. <sup>[1]</sup>

**And it's killing people.**

## Consider this:

- A 2017 study by Price Waterhouse Cooper finds although less developed markets have long been their stronghold, pharma counterfeiters are now using digital channels to penetrate developed countries where traditional drug distribution networks are well-protected. <sup>[2]</sup>
- Increasing public access to online pharmacies only serves to broaden the market for fraudulent drugs. It is estimated that 50% of the drugs for sale on the internet are fake, and that some one million people die annually after taking fake drugs. <sup>[3]</sup>
- Counterfeit market growth only fuels the appetite of new players.
- As if the cost of life and health weren't enough, brand reputation suffers any time a fake drug carries a brand name, further eroding public trust in the healthcare system.

Secondary packaging is a critical line of defense for product integrity. To build an effective defense strategy, brands must evolve alongside new threats and deploy appropriate measures to maximize product safety.

Anti-counterfeiting measures are used to deter, detect and thwart counterfeiting activities. This article discusses secondary paperboard packaging-related approaches, including the use of smart overt (visible) and covert (hidden) technology to support your product authentication strategy.

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## Overt Security Features

Overt paperboard packaging security features are visible to users, and usually require specialized equipment and complex technology, rendering them more costly to knock off. Specialty coatings, such as watermarks, provide unique graphic elements to lend authenticity when embedded into a design. Other overt features, such as 'soft touch,' cold foil or hot stamped foil, deliver tactile and visual protection. In addition to these specialized print technologies, embossing/debossing features and die cutting techniques may be utilized for increased security.

Barcodes support traceability, automatization, theft protection, or counterfeit protection. Widely used, the different arrangement of bars and gaps result in the coding of data. Linear barcodes display a pattern of parallel spaces and bars, while two-dimensional barcodes, such as QR (quick response) codes offer more memory capacity, thanks to an array or a matrix of dots and spaces.<sup>[4]</sup>

Serialization affords tracking by origin, batch number and expiration date. DataLase® photonic printing, for example, involves a two-step printing process. First, a conventional printing process like flexography or gravure is used to lay down a laser reactive coating in a patch on to a packaging substrate, such as paperboard. Then, at the latest point in the product supply chain i.e., at the point of packing or filling, the pre-printed patch is exposed to specific laser wavelengths, which activates the coating to print variable data or graphics as required. Each package may then be printed uniquely.

For continued protection in the realm of theft prevention, Sensormatic® and Checkpoint® are examples of brands that offer product and package tagging. Sensormatic is built around an AM (Acousto Magnetic) frequency, while Checkpoint, more commonly used by pharmacies, utilizes RF (radio frequency).

## Covert Security Features

When considering covert security features, you'll find a number of security inks from which to choose. Photochromic ink is light-reactive, fluorescent ink with prompt reversible color shift, when exposed to UV light.

Thermochromic ink is heat-sensitive ink that exhibits a distinct color change when touched or rubbed with a finger. Though covert, temperature-sensitive brand elements are simple and inexpensive to incorporate into a packaging design and lend authenticity for consumers.

Invisible fluoreseents are colorless inks which fluoresce a visible color under UV light. Often used with currency, this covert security technique presents a challenge to counterfeiters with its uniqueness.

A simulated watermark coin reactive ink provides instant verification by coin or other metal objects. Scratch away the ink to reveal a brand-specific message. Or you may also consider invisible ink that becomes evident when touched with a special pen. Similar to coin-reactive, this ink requires a unique felt-tip pen for message reveal.

Micro-security printing, invisible to the naked eye, uses microscopic text to represent graphics such as lines or borders as a simple, cost-effective method for fraud prevention. Micro print is viewable only through a micro-scanner, and is extremely difficult to copy.

You may also choose to embed RFID [radio frequency identification] tags into a product or label to covertly track its whereabouts, lot code, etc. A RFID system has three components: the product tag formed by a microchip connected to a tiny antenna, a reader that emits radio signals and receives answers from the tag in return, and a middleware that bridges the RFID hardware and enterprise applications.<sup>[5]</sup>

**By combining specialty features in your product protection strategy, your customized paperboard packaging design is more difficult to copy, while maintaining brand security.**

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## Inline Inspection

In addition to these brand security features, when you select paperboard packaging, be sure to choose a supplier who will guarantee product quality with 100% fully-integrated inline digital vision inspection for flawless results every time. High-speed vision technology during all phases of packaging production eliminates errors and print defects by inspecting each piece against your approved proof in an instant.

During prepress, GlobalVision artwork inspection ensures error-free prepress by verifying graphic files accurately. It also provides Braille inspection and verification instantly. Lightning speed inline inspection automatically ejects press sheets and carton blanks containing print flaws or die-cut errors and removes them from the line. With pinpoint accuracy, you can target specific zones to satisfy quality criteria.

## Business Impact and Reputation Management

The impact of counterfeits on legitimate business is significant and wide-ranging, from lost sales, cost of anti-counterfeit measures, reputation management and potential litigation of counterfeiters and possible victims. The challenges have made their way to the pages of 2019 annual reports from Pfizer, Novartis, Roche Group and Merck, among others.<sup>[6]</sup>

Producers must weigh the cost to implement anti-counterfeit tactics against impact to a firm's reputation when safety and quality are questioned, on top of the prospect of liability for victims of fake drugs bearing your product name. Be sure your brand's product authentication strategy is in order!

## About Colbert Packaging

Each day, for 60 years and counting, Colbert Packaging is committed to producing safe, smart and sustainable packaging for customers who include some of the biggest names in the pharmaceutical, healthcare and consumer goods markets. Colbert's Kenosha, Wisconsin facility produces offset and flexographic printed folding cartons, pressure-sensitive roll labels and package inserts; the Elkhart, Indiana operation includes folding carton production and paper tray forming. Learn more at [www.colbertpkg.com](http://www.colbertpkg.com).

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