

Marketing and Productivity Advantages of Today's Tamper Evident Bands

By George Albrecht, vice president, Axon LLC

In Chicago in 1982, seven people lost their lives after ingesting Tylenol that had been laced with potassium cyanide. Nearly 27 years later in February 2009, a Florida woman was arrested after grocery store shoppers witnessed her injecting fluids into jars of baby food. In between these incidents, numerous instances of human and pet food recalls and stories in the media about the potential for terror attacks on food supplies have made the public ever more vigilant about food and drug safety and tampering.

The packaging industry has responded to both the public's concern and to government regulation by developing ways to indicate whether a package has been tampered with. Most consumers are familiar with the film band over the cap and neck of a bottle, jar, or tub. If unbroken, the band signals that the package has not been tampered with.

Metal baby food caps that pop up after opening provide another example of a tamper evident packaging strategy. If the small tabs around metal and plastic

Types of Tamper Evidence



Film band



Metal pop-up cap



Plastic breakaway cap



Metal breakaway cap



Under-cap seal

caps* on milk and soft drink bottles are unbroken, then the package has not been opened since the top was put on at the factory. On many packages, consumers are warned not to use the contents of a package if the foil, plastic, or paper seal underneath the cap is not entirely glued to the rim of the package. Each of these — film band, pop-up cap, breakaway cap, and under-cap seal — provide visual and tactile indications of the integrity of the package.

Film bands and plastic and metal breakaway caps — the caps with the small tabs — are the most commonly used methods of assuring consumers that food, beverages, health, and personal care products on retail shelves have not been tampered with or damaged. Under-cap seals provide assurance once the consumer brings the product home. Between the two on-the-shelf tamper evidence methods — film or breakaway caps — film bands are by far the most versatile because of the ability of films to be used on large, small, or odd-shaped packaging.

The film band is also typically the consumer's preferred method of tamper evident packaging. Bands instantly indicate to the consumer that the product hasn't been opened or damaged. Breakaway caps have to be looked at carefully and many have to be twisted before the consumer is sure the tamper resistant tabs are still in place.

***Note: The industry term is closure — consumers refer to them as caps**

Bands are easy to remove. Some breakaway caps require a fair amount of torque, which causes difficulties for an aging population, and a small, but annoying percentage of caps fail to break entirely without the use of a tool. Film bands fit in with the public's growing concern about reducing waste — because there is the perception that film hardly takes up any space. Breakaway closures leave a cap and a ring, which appear more bulky and wasteful. Also in some cases the manufacturer can reduce the gauge of the container or the closure when using the band as the tamper evident feature.

While bands have been in longer and wider use than either breakaway caps or under-the-closure seals, bands have undergone recent innovations that help to improve product sales and increase the productivity of packaging operations.

All-in-one shrink label and tamper band

Marketers have been using the vibrant graphics and full package coverage of shrink labels to differentiate products on retail shelves for several years now. A new trend is to combine the tamper band with the shrink label in one unit. This makes sense from both the marketing and packaging perspectives. The package looks more unified and safe to the consumer. A number of brand owners have been the first to use the unified label and tamper band in their product



category and consequently achieved first-to-market advantage. The all-in-one label and band can help reduce labor and lower waste and rework.

Axon recommends that packagers using shrink sleeve labels investigate an all-in-one solution for labeling and tamper evidence. Even if the product currently does not need a tamper band, there are marketing advantages in terms of consumer perception about a safer product to add one. Packagers that are presently using pressure sensitive labels can gain considerable competitive advantages by embracing an all-in-one full sleeve label and tamper band.

New and thinner tamper bands

Corporate sustainability initiatives will benefit from replacing PVC film with more environmentally friendly PET or NatureWorks Ingeo™ PLA bioresin films for tamper bands. Many times Axon engineers assist operations personnel during the process of incorporating a new more sustainable material or when bands are being down gauged. This help to ensure a seamless transition to new films. It is possible to down gauge in some applications by as much as 25 percent and gain a cost savings — less material consumed. Choose a partner that routinely works with customers to ensure an optimum balance between material reduction and packaging line performance.

Clamshells and deli trays

Based on the increasing incidence of E. coli bacteria and lingering worries about food tampering, consumers are demanding greater safety in the fresh food segment. A number of packagers now use tamper bands on clamshell packaging containing fresh foods as a means of visually conveying the message that the

company is safety conscious. Tamper bands are an ideal solution for conveying the safety message in this application not only because of cost, but also the fact the film can be applied to large, irregularly shaped containers. The Axon EZ-650 tamper band applicator, for example, is designed to handle product container widths from 3-11/16 to 16-3/16 inches and a sleeve lay-flat of up to 25.6 inches.



Improving throughput, lowering cost, and marketing a more attractive package

Packagers may source a tamper evident application machinery for one or more of the following reasons:

- The company is currently hand applying bands and feeding the package into heat tunnels and management desires to improve productivity.
- The company wants to lead in its category by being one of the first to offer tamper bands and/or it wants to improve the visual appeal of the package with a full sleeve label and the tamper band is an added advantage.
- The company wants a tamper band system — applicator and heat tunnel — to perform to expectations right out of the gate.

We advise potential customers that are manually applying several thousand tamper bands a week to do a cost/benefit analysis on automating the process. Typically, the savings in labor cost ensures the applicator pays for itself in anywhere from a few months to less than two years. The speed of payback is determined by the volume of packages through the line.

Axon encourages companies wishing to move to a more vibrant full sleeve label and tamper band solution to form a team consisting of the marketing department, the applicator and heat tunnel supplier, the film supplier, and plant operations personnel. This collaborative approach speeds up the implementation process and helps to ensure a smooth running operation. In the early planning meetings, it is important to look ahead and consider potential changes to the basic package over time. This will also help to ensure that sufficient flexibility is built into the system.

Packagers should choose a reliable supplier to work with them from conception of the project through to completion. Avoid systems that perform well at first, but then degrade because the equipment simply was not rugged enough. Choose a system — applicator and heat tunnel — well integrated to start with and as conditions change know that the partner you choose will help ensure the applicator and heat tunnel stay in synch and that increases in production are successfully handled by the system.

Companies come to Axon because we are a leading U.S. supplier that offers reference accounts and has a demonstrated track record for innovation, training, and support services. Innovation is essential for us because it demonstrates to customers a commitment to the technology and expertise in the application of that technology. We assure production personnel at customer sites that most parts will be available via next day air and support technicians can be readily reached. These capabilities help to ensure tamper evident bands and full sleeve labels fulfill expectations over the life cycle of the system.

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Axon, a division of Pro Mach, is a leading designer and manufacturer of heat shrinkable sleeve labeling and tamper evident band application machinery and systems, as well as other integrated packaging products and solutions for both Fortune 500 companies and smaller, privately held businesses that specialize in the production of food, beverage, health and beauty aids, household goods, and pharmaceuticals. George Albrecht has more than 35 years experience in the packaging industry. George welcomes your comments, gealb@axoncorp.com.

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