

# Cork *Tech Talk* News

Manufacturers of Waterbase, UV+EB Curable Coatings, Varnishes and Adhesives

06 /02

## THE EVER CHANGING WORLD OF LABELS

Where oh where are labels going? Early labels provided only product identification in black and white, no color, and no graphics. Later simple icons and graphics began appearing with single colors. These labels were adhered or glued, to all forms of paperboard, glass, and metal packaging. Examples of some of these can be seen displayed on the walls and shelves in some of today's popular "yester-year" theme restaurants.

Labels as they evolved with packaging soon provided a window for advertising and brand identity establishment. Color, and added graphics propelled the shelf sale of products.

It wasn't too long ago that you might as well have described all labels as "paper labels". Paper label substrates evolved to include improvements provided by lamination, i.e., aluminum foil, and later aluminum metallization both of which gave label stock the shine, glitter, attraction and look of metal.

It can be said that labels have evolved with new forms of packaging. Plastics is the word here. Plastic bottles have made their presence felt with materials such as polyethylene and polyethylene terephthalate (PET) offering lightweight, improved shape, design cap-abilities, and acceptable barrier characteristics. High-density polyethylene (HDPE), polycarbonate (PC), polypropylene (PP) and polyvinyl chloride (PVC) polymer containers also have seen significant growth.

Labels have gone plastic too. Plastic sub-strates provide gloss, satin or matte finishes, opacity to full transparency, color and/or metallized glitter, superior water and product resistance, abrasion resistance and extended durability.

Pressure sensitive (PS) (thin gauge films) with sophisticated printed graphics, provide the majority of labeling for plastic containers. In-mold labels for blow and injection molded packaging, and roll labels (filmic sleeve, wrap around shrinkable) are also enjoying good growth.

There are many different types of labels produced for today's markets. Broad categories describe them as: glue or adhesive applied, pressure sensitive or (PS), heat-seal, in-mold, heat transfer, shrink and stretch sleeves and box labels.

Pressure sensitive adhesive (PSA) labels currently hold a greater share of market than wet-glue labels in the USA, and are forecast to command 54% of the world market by 2005. Plastic labels are forecast to grow to 27% of the global market by 2005 at the expense of paper labels.

Newer label designs such as sleeve/shrink, in-mold and heat-seal wrap-arounds, will account for much of the growth. It is said that aesthetic, performance, environmental, technological and economic factors will favor plastic as a label substrate choice over paper.

It is said that the growth of the world's consumer goods markets, including personal care products, specialty beverage, food and pharmaceutical, will drive the penetration of technologically specialized, value added labels which offer performance beyond product identification.

Application of these value added label designs have been growing for some time. Label designs of this sort feature coupons and other multiple layer booklet concepts that offer foldout product use instructions to consumers.

Security is another factor driving the development of so-called intelligent labels. Intelligent labels offer brand protection, product identification and authentication features. Intelligent labels are capable of providing process control benefits such as time, temperature and damage indicators.

Smart labels are now available that feature data storage, or security capabilities through the lamination of smart circuitry to a self-adhesive label structure.



Full-body shrink labels

OVER

These label technology improvements mean that more data can be stored and read with mobile data capture devices. New technologies such as Blue tooth (wireless technology) and RF-ID (Radio Frequency Identification) allow scanning without line of sight requirements. RF-ID technology is already being used by the automotive industry controlling automatic door locks, utilizing key- fob control devices. Some of the airline industry is also using RF-ID to scan luggage tags for destination control information.

All print processes are used in the printing of labels. Letterpress remains the most dominant print technology for the printing of quality labels. Flexography is the fastest growing print process with UV flexo, in particular, proving capable of providing print quality equal to offset. Combination printing presses featuring letterpress units, some UV, in combination with flexo/UV flexo and rotary screen units are popular, offering high quality graphics. Combination presses are typically supplying high quality, high value clear plastic labels targeting the consumer toiletries and cosmetic markets.



Heidelberg NexPress

Digital printing is quickly targeting the label market as a natural for the short run as well as the long run label markets. Everyone is interested in speed of availability and the digital electronic process can deliver faster. Orders can be taken from remote locations electronically utilizing the World Wide Web. Variable data entry allows for differentiating each label if required. Direct imaging speeds the process further.

Digital laser cutting is another process making strides. Thinner filmic materials continue to be introduced as a means of lowering costs. The thinner the material the easier it is to cut utilizing laser. Laser cutting is a natural technological fit to digital printing. Digital technologies are fast and easy throughout the entire process and quicker to the marketplace.

New plastic (sometimes called synthetic paper) substrates are constantly being introduced. Additionally, advances in specialty adhesives, coatings, and inks offer improvements.

Most labels, aside from reverse printed clear filmic types require protective surface applied coatings or varnishes to protect the printed surface.

LOOK TO CORK!..... for all of your coating varnish and adhesive needs, for both aqueous & UV/EB coatings, varnishes and adhesives.

LOOK TO CORK!..... At: [www.corkind.com](http://www.corkind.com)