



# Laminated Labels: The Clear Choice

We get lots of interesting labeling questions every day...most have to do with out-of-the-ordinary features required for a label application. One of the most frequent queries involves highly durable printed labels.

We, in turn, have to ask questions regarding the specifics of the labeling application, the environment the printed labels have to endure and how long, chemicals that might contaminate the label, the label materials currently being used and why they are not holding up, etc.

When the evaluation is complete, we often recommend **label lamination**. Sometimes the only sure way to protect a label for the probable life of the labeled item is to totally protect it with a layer of plastic.

## Label Lamination Techniques

In general, this can be accomplished in one of four ways:

- Hand-applied, clear poly label over the printed label
- Brush-on laminate coating
- Spray-on laminate coating
- Auto-laminate at the point of initially printing the label

Hand-applied **clear labels** are a good choice for low volume needs, but it goes without saying, this can be very tedious work. Die-cut clear labels come on rolls and are manually removed from the roll and hand-applied over the printed label. It's difficult to consistently place the laminate accurately over the printed label. Most companies want their product labels to look very professional; they want a good-looking label, one that matches the pride they have in their product. A crooked over-lam just won't cut it. Still, for small volumes, hand-applied is the most cost-effective method.

It is assumed that it is important to cover the entire label evenly to protect it from destructive elements. That is why **brush-on** and **spray-on laminates**, or overcoats, are problematic due to the inconsistency of coverage. Brush marks and uneven spraying or brushing can open up voids in the coating over time, allowing destructive agents to do their work. It can be an uncontrollable process; the thickness of the coating may be impossible to consistently maintain. Uniform thickness and coverage contributes to the bar code reading success. Irregular coating thickness, (i.e. "hills and valleys" from brush marks, air bubbles, and abrasion) from these irregular surfaces can lead to a reduction in the scannability of the bar codes. Uniform thickness and coverage is essential. The thicker the coating, the more difficulty in getting the decoding beam to the symbol and back to the reader/scanner.

Many of our manufacturing customers come from the aerospace, automotive and motor industries. They are accustomed to using metal rating plates (some industries call them name plates or data plates) for their products' vital information: serial number, model number, batch or lot numbers, manufacturing location, etc. Metal rating plates are expensive unless purchased in large volumes, usually from a 3rd party, and they require a commitment as to the data etched on the plate. Volumes, formats and data are rarely static, but once it's etched, it's etched, and they can easily be stuck with an unusable inventory of name plates.

## Auto-lamination

That brings us to **auto-laminating** processes. One comprehensive method is to print, die-cut, and laminate the label all in one quick process. It can be done more easily than you might think. A professional-looking, laminated label with rounded corners, made in-house and on demand can be printed in batches of 1 or 100,000+. And this die-cutting process is not limited to squares or rectangles. An infinite number of label shapes can be designed and produced in small batches as needed.

Given that one is using a high-quality thermal transfer printer, a high-quality laminator/die-cutter, and quality synthetic labels (underlay) and laminates (overlay), the process is very straightforward. The static and variable data and graphics are printed with the thermal transfer printer set in continuous mode (no label breaks, no gaps - just a continuous roll of label material) with a black mark printed to trip the printer's sensor to print a new label, one after another. This continuous feed of printed material is then fed to a laminator unit.



There the label is cut using a customized die, cookie-cutter style, and laminated via cold-press, all in one step. The finished labels, are then rewound on a take-up spindle while the waste matrix is stripped (removed) and rewound on another spindle for later disposal. Voila - beautiful, custom labels with a consistent, virtually impregnable matte or glossy laminate covering. The possibilities are endless.

QA departments are big fans of this system. With the right underlay and overlay materials, the finished labels can withstand all kinds outdoor elements, chemicals, abrasion, for the life of the product. For security applications, over-laminates can include holographic designs.