

# The Art of Laminating

## Part 1 - The Basics of Lamination

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Laminating is an artform or skill unto itself. It takes patience and practice to perfect the technique that works best for you. Learning to use a laminator is not unlike learning to use a vinyl cutter or applying die-cut vinyl graphics. Once you get the hang of it, you are home-free! Mistakes are made, which is part of the learning process, but we learn from those mistakes. With each type of material that needs lamination comes a new learning experience. One laminate may not be the cure-all and the need to learn how to use multiple laminates might very well be a necessity.

### Why do we need to laminate?

In simple terms...to PROTECT the print or extend the life expectancy! Virtually all forms of digital inkjet printing technology needs either a film or liquid laminate for protection. Yes, even the solvent based inkjet prints. Solvent based inks with no lamination may last up to two years in outdoor conditions, but to achieve the longest possible durability a laminate must be added.

Your typical aqueous (water) based inkjet prints are more prone to damage than the solvent based prints. Sometimes all it takes is a drop of sweat, a splash of water or accidentally touching a dirty surface to turn a beautiful print into garbage. Humidity and moisture are big problems for the aqueous prints. Have you ever seen what happens to a photo gloss print that is placed under glass or in a plastic sleeve that has not been laminated? It's not a pretty sight to see a perfectly good print stuck to the inside of the glass or plastic. However, there are water resistant inkjet materials available which can resolve some of these problems, but may leave a watermark or stain on the print.

Handling these prints may not be as easy as it sounds. A kink in the material or a minor scrape against an object could possibly cause the ink to come off and then its back to the printing stage again. Basically, you handle the prints with care until they are protected. The product line for aqueous inks are improving, but it's doubtful that we will be able to get completely away from the use of laminates and those new materials will have a higher cost associated with them.

Remember that it is up to you to inform your client as to what is needed to protect the print, because they may not understand the various applications to digital printing. You have to assist the client in making certain decisions on the finished product and have a good understanding of how the print is to be used. Is it used indoors or outdoors? Is it a one day event? What elements will the print be exposed to? More than likely, the client

will rely on you to make the decision as to the material, ink and lamination (if needed) to use for their project.

Longevity is an issue with digital printing. How long will it last? Truthfully, no one knows for sure. I, personally have few prints that are over ten years old that were digitally printed using a photo gloss material and a 5mil hot laminate with dye based inks. They look as good as the day they were printed, but then again these prints have never been exposed to sunlight or exposed to extreme conditions. In looking at the vehicle wraps and graphics that we see everyday, we really don't know how long they will last. Be assured that the people that produced those graphics made every effort to protect the print and maximize the life expectancy. Even if they were only to be used for a short period of time.

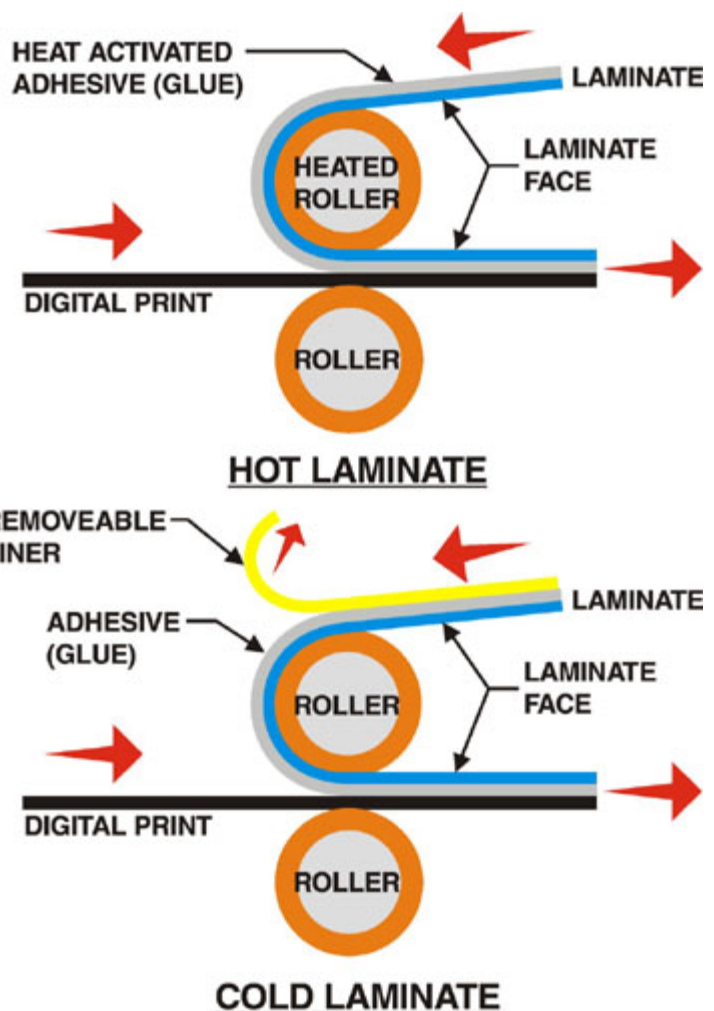
### Who are the big players for laminators?

There are others out there, but the above are the companies that you may recognize by name. Is one better than the other? Not necessarily. It all depends upon what you need and what your future goals might be. Features in these machines could be the deciding factor along with the price tag.

### Types of laminators

Laminators come in all shapes and sizes. The sizes may range from an identification card size up to 80" in width. Each type or style of laminator has its specific purpose. Some are designed to have a multiple use design, while others only have one purpose in mind.

The most common laminator, known as the "Pouch Laminator", is found in office supply stores that offer lamination services. These laminators are fairly inexpensive and have the capabilities to laminate up to 11" x 17" (ledger size) documents. The pouch laminator uses sheets of laminate that are V-shaped. A document is inserted into the V-shaped (pouch) laminate and feed into the laminator. As the laminate is fed through, heat is applied to activate the glue and seal the document in a coating of



laminates. This is also known as "Encapsulating", and as long as the document has an overlap of laminate around the edges, it is waterproof. The pouch laminator only uses hot laminates and is fairly easy to use.

Another type of laminator is the "Roll Laminator". This style of laminator uses rolls of laminate that are pressed between two rubber or silicon rollers to apply the laminate to the document. Size of the laminator can vary from 12" to 80" in width with as many features as there are sizes. Among these laminators there are two types, which are "Hot" or "Cold". A "Hot" laminator has the advantage of using either hot or cold laminates, whereas the "Cold" laminators only use cold laminates. Even though they may look identical, they're not!

Hot laminators heat the roller or rollers up to temperatures that can exceed 240 degrees. The heated roller(s) activates the glue of the laminate as it is being fed through the machine. This laminator can also use cold laminates by not heating the roller(s). One option that you may have is that both the upper and lower rollers can be heated. A distinct advantage when encapsulation is needed. The dual heated rollers allow for encapsulation of a printed item in one pass, similar to the above mentioned "Pouch" laminators. There are specific roll laminators that are designed for dye sublimation processes. The laminator is outfitted with steel rollers that can reach temperatures greater than 400 degrees.

A roll laminator is the most widely used type for digital printing, but it has other uses too! Do you ever get tired of applying transfer tape to those big projects? Solution...try using a laminator and cut your labor time in half. What about mounting a print to some type of board such as a foam board, art board, pvc or plexiglass? Do you have several one color yard signs to apply vinyl to? You can always find some use for a laminator!

One of the latest additions to the family of laminators is the liquid laminator. This type of unit was originally designed to accommodate digital prints that used an oil or solvent based ink, but can also be used for aqueous based prints too. These machines are commonly used in conjunction with the grand format digital printers and thus can be very large, up to 16' in length. Features for the liquid laminator may include a roll to roll feed system and a drying system. There are two types of liquid laminators, one that uses pumps and the other that uses a gravity feed system to apply the liquid laminate. The liquid laminate can be applied in various thicknesses to accommodate the prints use and/or longevity. The great thing about liquid laminate is its cost and that it can provide the same amount of protection that a film laminate might.

The cons to looking into any type of laminator may appear to be the cost, but if you weigh out the alternatives you may find the significant time savings, and time is money, that can offset the expense, plus satisfied customers.