Sustainable, Simple, Cost-Saving: Wasteless Lamination

INTRODUCTION

Organizations that laminate secure identities and cards in high volumes are constantly seeking ways to cut lamination consumables costs without compromising card security and durability. Simultaneously, they are also seeking new sustainable product offerings that help them meet government standards for environmental responsibility.

Wasteless lamination technology meets both of these demands and offers consumers a cost-effective and eco-friendly alternative to traditional lamination methods. This white paper will explore:

- How wasteless lamination enables suppliers to pass savings on to consumers, while meeting the ecological and financial imperatives of sustainable business
- Why it's critical that your card issuance solution can intelligently self-regulate temperature — and what that means for your bottom line
- The benefits and criteria to consider when evaluating wasteless lamination solutions

WASTELESS LAMINATION DEFINED

Before we define wasteless lamination, let's first examine traditional lamination methods. With traditional lamination, printed cards are passed from the main printer into a lamination chamber, or module, where a lamination patch is then applied to the card — either to one or both sides at the user's discretion. In this scenario, a typical lamination consumable consists of lamination patches adhered to a strip of clear film known as "carrier film" that connects two rolls or cores. The carrier film only serves as a "carrier" of the overlaminate patches until they can be applied to cards during the lamination process.

The first "supply" roll consists of new laminate patches adhered to carrier film that is wrapped around a supply core. The second roll consists only of an empty "take-up" core. When the laminate from the first roll has been adhered to the card, the take-up core then "takes up" the leftover carrier film. After the supply roll has been depleted of laminate patches and the take-up core has been filled with subsequent leftover carrier film, the operator then removes both cores along with the used carrier film. Ultimately, this traditional lamination process produces excessive waste byproducts: two cores and a full roll of used carrier film — none of which are easily recycled.

In contrast, wasteless lamination technology aims to reduce this level of needless waste by eliminating the need for carrier film and subsequent take-up core. With wasteless lamination, overlaminate patches are attached to one another in a continuous stream of material on a single roll, without an underlying carrier. As each patch is detached from its supply roll and adhered to a card, the lamination cycle is completed. Once the supply roll has been depleted, all that's left is the single empty core that once contained the overlaminate material. Because no carrier film exists, no used carrier film waste is produced.

REDUCE NEEDLESS WASTE

Wasteless lamination technology reduces needless waste by eliminating the need for the laminate material carrier film and subsequent take-up core found in traditional lamination consumables.

A traditional overlaminate roll with lamination patches, carrier film and take-up core.

A wasteless lamination roll with no carrier film or take-up core required.

COST–EFFECTIVENESS OF WASTELESS LAMINATION

As noted previously, traditional lamination consumables use two cores and an underlying carrier film to support and "carry" overlaminates through a lamination cycle, where they are applied to cards. Not only does traditional lamination produce waste — an additional core and carrier film — but there are also costs associated with the building, assembling, packaging and shipping of those materials. Of these materials, the manufacturing of carrier film is the greatest expense. As a result, traditional lamination supplies are higher priced to defray their cost.

Without the need for carrier film, wasteless lamination technology substantially reduces the cost to produce durable lamination consumables. As a result, suppliers are able to pass these savings on to consumers and offer more attractive pricing for wasteless overlaminates than is possible for traditional lamination supplies. In fact, wasteless lamination can reduce lamination consumables costs by as much as 40 percent for organizations that laminate cards and IDs in high volumes.

ENVIRONMENTAL SUSTAINABILITY OF WASTELESS LAMINATION

Traditional lamination methods using the additional core and carrier film produce a considerable amount of waste that ultimately ends up in landfills. In addition, most lamination solutions consume significant energy to achieve and maintain optimal operating temperature. However, lamination solutions with technologies like "instant on" and intelligent temperature control heat more rapidly and maintain optimal operating temperature while simultaneously conserving energy.

As societies become more eco-aware, governments have begun to mandate that organizations comply with ever-increasing green initiatives. For companies, universities and government agencies that produce high volumes of laminated cards and IDs, wasteless lamination is an excellent way to demonstrate their environmental responsibility. For those pursuing environmental management certifications such as ISO 14001, wasteless lamination alternatives bring them one step closer to such achievements.

Eco-friendly technology innovations such as wasteless lamination and "instant on" with intelligent temperature control are cost-effective and hassle-free ways to minimize environmental impact and should be considered for those organizations seeking to employ sustainable business solutions and reduce their overall carbon footprint.

ECO-FRIENDLY TECHNOLOGY

Eco-friendly technology innovations such as wasteless lamination provide a cost-effective way to minimize environmental impact.

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SELECTING A WASTELESS LAMINATION SOLUTION

The following recommendations will ensure selection of the most appropriate wasteless lamination solution for your card issuance needs:

Laminate Patch Coverage

As you compare solution features, consider how a printer's lamination process may impact the durability of your finished cards.

Laminate patches that provide the largest overall surface coverage for your finished cards will inherently provide the best durability. Any solution you consider should also provide consistent patch placement on the card. This will ensure that whether you need simple photo IDs or more secure government credentials, your finished cards will look as professional as they are durable.

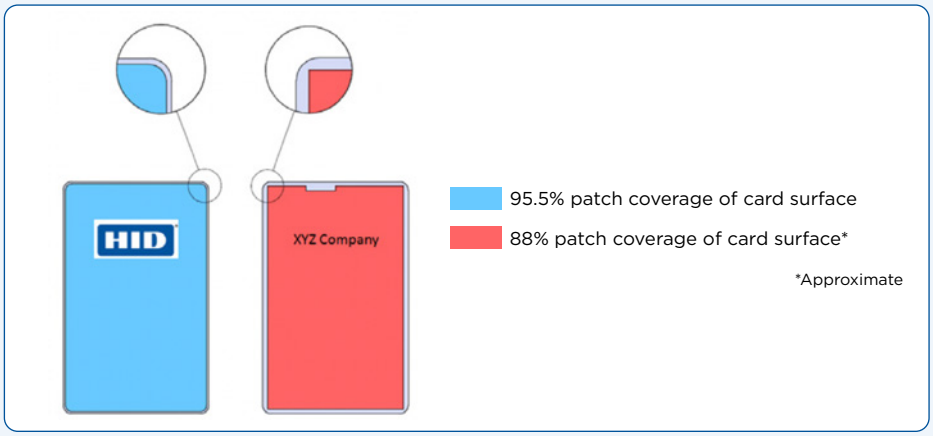
Short of actually measuring the size of individual patches, the best way to ensure you obtain the largest patch coverage possible is to look for solutions that offer laminate patches with radial corners as opposed to squared corners. Radial corners allow for an expanded patch size, whereas squared corners limit a patch's overall size and, by extension, its total card coverage. See Figure 1.

If the coverage of a square-cornered patch were to equal the surface coverage of a radial-cornered patch, the squared corners would exceed the overall surface area and thus hang over the edge of the card. As such, squared patches must be smaller to fit the surface area of the card. Unfortunately, the smaller the patch, the less coverage you have — which impacts overall card durability.

WHY PATCH COVERAGE MATTERS

Radial-cornered overlaminate patches cover more surface area of the card — providing increased protection and overall card durability.

Figure 1.



Device Readiness and Intelligent Temperature Control

Most users of lamination products today experience several minutes of wait time when processing their first card due to the traditional heat-up times of lamination equipment. These lamination products also tend to waste energy in order to remain in this ready state — all in an effort to minimize the wait time for subsequent lamination jobs. For reference, most print and lamination solutions (both wasteless and non-wasteless) can take anywhere from two to five minutes to heat up. Solutions that heat up more quickly will eliminate critical downtime, which is especially beneficial for large volume but intermittent issuance scenarios. High-volume, intermittent issuance is common for organizations that instant issue hundreds of IDs per day but assist customers one at a time. Good examples of this are the Department of Motor Vehicles (DMV) or a university campus at the beginning of its academic year.

In these and similar instances, individuals are generally assisted by a clerk or administrator who creates printed cards or IDs one at a time. Once a cardholder has completed their transaction, they must generally provide paperwork and/or answer a series of required questions to receive their newly printed identification card. This is where "instant on" lamination technology provides its greatest benefit — ensuring the lamination unit is always ready and that energy isn't being wasted — even during idle times when it needs to stay at elevated lamination temperatures.

It is also recommended that your chosen solution include built-in intelligent temperature control. This will ensure that the unit consistently stays at an optimal operating temperature — even when printing large volumes. The control also helps to eliminate risks generally associated with overheating such as warped cards, as well as the inconvenience of a forced cool-down cycle during peak operation.

A solution that readies itself for production quickly and can intelligently self-regulate temperature is ideal for higher volume instant issuance, where downtime translates to operator inconvenience, long lines and unhappy cardholders.

READY WHEN YOU ARE

Solutions that ready themselves for production quickly and can intelligently self-regulate temperature are ideal for higher volume and/or intermittent instant issuance.

Support for Large Capacity Consumables

Organizations that intend to print and laminate in high volumes should only consider solutions that support high-capacity consumables.

- The more laminate patches a system can contain, the less time will be spent replenishing supplies. This significantly lessens the downtime required to change out supplies and minimizes subsequent productivity loss.
- It is also recommended to seek solutions that offer either a standard or optional 200-card input hopper as this will also keep production up for larger volume jobs

Security

As you consider various solutions, it is recommended that you seek those that offer inclusive security features that will increase the overall security of your card issuance program. Examples include:

- Password protection — User-defined passwords lock down printer access ensuring that unauthorized personnel cannot use the printer to print fraudulent cards or steal personal information

- AES 256 data encryption — Safeguards cardholder data while in transit, guaranteeing data integrity and authentication between your PC and the printer

Ease of Operation

Ease of operation may seem like a very basic criterion, but it is nonetheless worthy of consideration. A non-intuitive card printer may not only cause operator error and frustration, but it will also most definitely impact productivity.

- Seek wasteless lamination solutions that offer simple, cartridge-less lamination loading as well as user-friendly, graphical displays and intuitive controls

- Preferred units will also include built-in sensors to ensure that overlaminates are automatically advanced within the unit and aligned properly for optimal results

Quality and Warranty

As with all operational investments, quality and dependability are paramount. Solutions worthy of serious consideration will be those manufactured in ISO 9001-2008 certified facilities. Another aspect of quality is product warranty.

- An ISO 9001-2008 registration certifies that the provider's quality system governing the design, manufacture, sales and distribution of their products has been verified by credible third-party audits

- Solution providers who truly stand behind the quality of their products will offer longer-term warranties for both printers and printheads

THE LOW-COST, HIGH-QUALITY CHOICE

Organizations that laminate secure identities and cards in high volumes are constantly seeking ways to cut lamination consumables costs without compromising card security and durability. Simultaneously, organizations are also seeking new sustainable product offerings that help them meet government or corporate standards for environmentally preferable purchasing. Wasteless lamination technology meets both of these demands and offers consumers a cost-effective and eco-friendly alternative to traditional lamination methods that ultimately results in a lower cost per card.

Learn more about HID's range of FARGO® Card and ID Badge Printers today at:
www.hidglobal.com/products/id-card-and-badge-printing/fargo

Or contact us at: **sisales@hidglobal.com**

About HID

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WASTELESS LAMINATION BENEFITS:

- Lower cost
- Increased productivity
- Earth-friendly

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