

Securion and Lamination

Principles and Evolis advantages

1/ What does lamination mean?

What we call Lamination is the process of applying a thin varnish or a film on the surface of a card.

This is generally performed by a two-step machine, able to first print, and then apply the film later on.

The film or varnish is applied at hot temperature. This one cannot be obtained with a common printing head and therefore requires special equipment.

Usually, laminators are equipped with a 'hot roller' aiming at reaching temperature from 140°C to 190°C.

Thanks to this temperature, they do 'stick' the laminate material onto the PVC card.

2/ What is a laminate film?

There are several kinds of laminates that can be stored in two main families:

- Patches: PET thick films aiming at protecting the card for several years (5 to 10).
- Varnish: thinner film aiming at protecting the card for 2 to 3 years.

Both laminates can be Clear (UV protector) or Holographic (UV protector and Security marking).

Applying a laminate onto a PVC card will help:

- Increasing the card life-span by protecting the colours against UV and scratches
- Securing the card content and preventing any attempt to modify the card's data (the laminate cannot be removed)
- Adding another security level by adding a generic hologram, preventing basic fraud
- Controlling the card-issuance process by using a unique custom hologram that cannot be obtained from the manufacturer (registered design and ownership) to fully secure the printed data

So there are many security steps and it is important to qualify what the real customer needs are. Laminate pricing scale may vary from 1 to 5.

3/ Laminate film structure

There are several technologies to build a laminate film, depending on the laminator's characteristics:

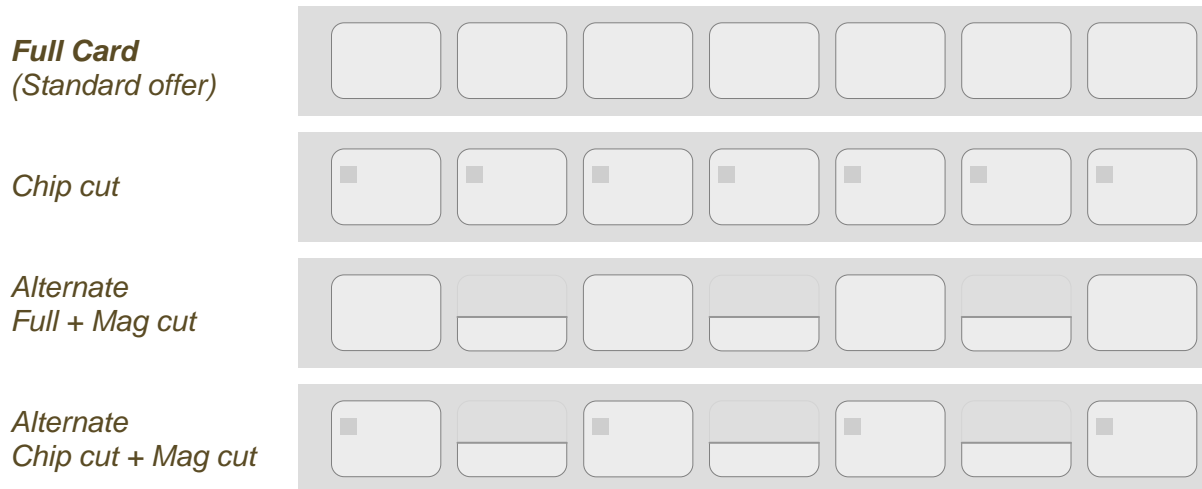
- The film consists on several layers, one for the film transport, and one to be detached and apply to the card (Securion, Fargo DTC 550, Magicard SP75, Datacard SP75)
- The film consists on a single layer that will be applied to the card and cut by the lamination (also called waste less – refer to Zebra P640i)

PET is a quite expensive product so the waste less technology allows significant savings on laminates budget (from 50,000 cards) but requires a more complex lamination system. It is only available for Patches, not film films.

The Patch film can be set with identical laminate patches or alternate ones (for dual-sided lamination). Combinations between several designs can be made for quantity projects:

- Full card
- Mag card cut
- Chip card cut
- Half card (vertical cut)

So the film design would be as follow:



The varnish film is like a monochrome ribbon. It is a continuous one that doesn't any positioning. Once the laminate is applied, the film will slightly move ahead, ready to issue the next one.

4/ What about the cards?

Because of the high temperature of the lamination process (140 to 190°C), the card may be bended during the laminate application.

All the competitors do recommend the use of Composite PVC Cards (40% PET in its core, 60% PVC for the external parts) for both single-sided and dual-sided lamination.

Those cards can be sourced from card manufacturers. However, like any other blank card selection, it is required to qualify such a card before moving ahead to volume purchase.

It is not Evolis' willing to add such cards in the supplies catalogue. Some suppliers are currently under evaluation. EBP's will be forwarded to those card manufacturers when required.

IMPORTANT

A key argument for Evolis is Securion's ability to laminate at quite low temperature (lower than 160°C).

Securion performs **single-sided patch lamination on Evolis Premium blank cards (standard PVC cards)**. Cards are not bended after the process.

This means around **10 cents savings / card**, which is a huge advantage towards competition.

5/ Evolis offer for laminated cards

The standard Evolis offer consists on:

- Clear Patch, 1.0 mil (25 microns thick), 200 cards / roll
- Clear Patch, 0.6 mil (15 microns thick), 200 cards / roll
- Continuous full card varnish, generic hologram (Eagle security), 400 cards / roll