Certified Media and Supplies

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All Eltron card printers feature the same basic printing operations through dye sublimation and thermal transfer printing that utilize different types of media: plastic cards, monochrome and color ribbons, and laminates. There are many third party after-market supply manufacturers now offering various types of media claiming to be compatible with Eltron card printers. Qualification tests performed by our engineers have confirmed that many of the third party after-market supplies do not produce the same print quality as Eltron certified media and supplies. Your high quality Eltron card printer will operate at its optimum performance when only using Eltron Certified Supplies (plastic cards, ribbons and laminates). By using Eltron supplies you are guaranteed consistent performance and true compatibility with your Eltron printer. Eltron also offers complete system level support for our printers, which include answering questions about ribbon functions and laminate solutions. Each of our Technical Support Representatives are trained on the entire operating functions of printers which include media and supplies.

Eltron Premier and Premier Plus Plastic Cards:

PVC and Composite PVC plastic cards can be used with Eltron color and monochrome printers. Eltron's Premier line of durable plastic cards enhance the print quality and image sharpness needed to produce vivid colors and detailed readable bar codes. Eltron guarantees its cards to be ISO-Compliant, dust-free, and have smooth edges. Eltron offers Premier (PVC) cards, available in 10 and 30 mil thickness; as well as Premier Plus (Composite PVC) cards, available in 30 mil thickness. (30 mil cards = 0.76 mm, 10 mil cards = 0.25 mm)

Eltron's Premier line of high quality plastic cards meet ISO-7810 ID-1 specifications (CR-80 specifications 2.125" x 3.375" / 53.98mm x 85.72mm. Premier 10 mil cards are packaged 1,000 cards per box in cellophane wrapped sets of 200 cards. Premier and Premier Plus 30 mil cards are packaged 5,00 cards per box in cellophane wrapped sets of 100 cards. Each box displays the Eltron part number (numeric & barcode), type of card, number of cards, and lot identification.

Eltron Premier Cards (PVC) provide high image quality, medium flexibility and temperature durability. They are recommended for all applications requiring edge-to-edge printing. They are available with or without a magnetic stripe (LowCo or HighCo). The estimated life for Premier cards is 24 months with 3,000 duty cycles. Applications for PVC cards are cards with moderate usage and controlled environments such as transit passes, visitor badges, identification cards, and loyalty cards.

Eltron Premier Plus Cards (Composite PVC) provide high image quality, high flexibility and temperature durability. They are available with or without a magnetic stripe (LowCo or HighCo). The estimated life for Premier Plus cards is 48 months (4 Years) to 84 months (7 years), depending upon actual card design and usage. Composite PVC cards are stronger because they are made up of a polyester core and sandwiched with PVC (60% PVC and 40% polyester core). These cards are used in

application environments that are uncontrolled and require high usage such as time and attendance, access, control, equipment check-out, and multi-application university ID cards. Premier Plus cards are recommended for use with the P500/P520 Card Printer when laminating both sides of the card or when producing true ISO flat cards is necessary. The P500/P520 laminate patch helps to extend the life of the card.

The chart below summarizes Eltron Certified Plastic Cards standard features, functions, and benefits:

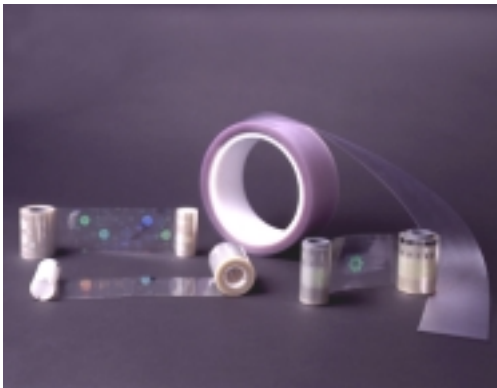| Feature	Function	Benefit
High quality PVC material	Vivid color	Better print quality
	Consistent image (batch to batch/card to card)	Eliminates need to re-issue cards
	Longer card life	Saves money and eliminates need to re-issue cards
	Better UV resistance	Saves money and better print quality
Dust-Free	Reliable printing	Increased efficiency- more "up time"
	No image voids	Better print quality
	Optimized ribbon utilization	More economical
Smooth edges	No damage to print head	Saves money and guaranteed print quality
	No ribbon cutting	Saves money, better print quality, and more efficiency
	Allows quality edge-to-edge printing	Higher quality images
	Prevents scratch lines in printing	Prevents wasting cards, eliminates re-prints
ISO-Compliant Flatness/Dimension/Thickness	Conformance to standards set by the industry	Guaranteed performance
	Allows reliable feeding into printer	Saves times and money, better print quality
	Each card is exactly the same-allows for good image transfer	Consistency in all applications-allows you to win the business
Guaranteed Printer Compatibility	All Eltron supplies are tested and certified for use will all Eltron card printers	Reliable products that will assure high quality printed cards

TrueColours™ Printing Ribbons:

Eltron's line of high quality printing ribbons is specially formulated with optimized chemical composition of dyes and varnish that create brilliantly clear and vivid images. TrueColour ribbons offer enhanced print character durability and the 24-bit color and gray scale images show exceptional clarity to all images with a proven longer image life. TrueColour ribbons are designed with a unique "back-coating," which allows the ribbon to pass smoothly over the printhead and helps to extend printhead life. The ribbons are configured on a patented core design. This

unique core prevents the user from installing the ribbon incorrectly on the printer. It also helps to prevent any ribbon slippage during the printing process (Patent No. 6,109,801). Each roll of TrueColour ribbon is shipped in a protective package for extended shelf life. It helps to prevent dust particles from attaching to the ribbons during storage. Each box displays an easy to read label noting the type of ribbon panel, Eltron's part number (numeric & barcode), and lot number.

TrueColours™ Monochrome Resin Ribbons utilize "thermal transfer printing technology." A process by which a heated printhead is used to transfer a digitized image from the ribbon to the surface of the card. Monochrome ribbons can be used on all Eltron printers. They are available in a variety of colors. Colors include black, red, green, blue, yellow, gold, silver, white, and scratch-off gray.

TrueColours™ Multi-Panel Ribbons are developed with the newest technology dyes available. Multi-panel ribbons utilizes dye sublimation, which means the color dye is vaporized into a gaseous state and then diffused onto the cards at the printhead station. Many types of panels are available (a few have a clear protective overcoat (O) panel which helps to protect your card image).

- 6 Panel ribbon (YMCKOK) is ideal for printing a full color card on one side and monochrome on the back. For use with the P400, P420, P500/P520, or P600.

- 5 Panel ribbon (YMCKO) is designed for full color printing on one or two sides. It can be used with all of the Eltron color printers.

- 5 Panel ribbon (YMCKK) is designed for use with the P500/P520. It would print full color on the front and Kresin on the back. A P500/P520 laminate patch will then protect the card image.

- 4 Panel ribbon (YMCK) is designed for use with the P500/P520 printer/laminator. A clear protective overcoat (O) panel is not necessary because the P500/P520 laminate patch provides sufficient protection.

- 3 Panel ribbon (YMC) is designed for printing full color on one station; clear protective overcoats or laminates can be applied at the second station (P500/P520 or P600 models) if needed.

- 2 Panel black dye-sublimation ribbon (K dye + O) is one panel of black and one panel of clear protective overcoat. This ribbon is optimal for printing photo quality, black and white images.

- 2 Panel black resin ribbon (K resin + O) is one panel each of black and one panel of clear protective overcoat. This ribbon provides the least expensive way to print high quality, monochrome badges with bar codes.

TrueSecure and MaxSecure Laminating Ribbons: Eltron offers two brands of extremely durable protective laminating ribbons, TrueSecure and MaxSecure media with varying degrees of durability and security from 2 years to 10 years. TrueSecure includes a complete line of overlay varnish material that can be applied by the printhead directly onto the card or it can be applied by a hot roll lamination process (P500 or P520 models only). MaxSecure media can only be applied by the Max Series printers.

TrueSecure Varnish Overlay and Laminating Ribbons

TrueSecure media includes protective materials such as varnish overlays and laminates that are designed to eliminate the potential of tampering or alterations to cards. This media consists of clear and holographic varnish overlays and laminate patches that are specially formulated for exceptional quality in card protection for projected card life span of 2 to 7 years. Varnish overlays can be used on all Eltron card printers. Laminate patches can only be used with models P500 & P520.

The Pcard
Holographic ICON

Holographic Varnish Overlay is the most popular security protection (copy protection) method used on printed PVC or composite PVC cards. Eltron's holograms are created using a two-dimensional photograph and recorded to a holographic layer at a +90 degree incline (also known as a contact method). The holograms are applied with a thermal transfer technology, producing a top protective layer approximately 4 microns thick. All Eltron printers can apply the holographic varnish overlay. For extra protection, you can apply the holographic varnish overlay with O-panel applications. Clear varnish overlay ribbons are also available. Eltron also offers custom design for holographic ribbons, contact your Eltron Business Partner for a quote.

Laminating ribbons consist of 1 mil (25 micron) or.6 mil (15 micron) thick polyester laminate patches. The laminate patch provides protection against abrasion, dye migration, fading, security protection against fraud and tampering efforts of the printed PVC and composite PVC cards. The P500/P520 applies the laminate using heat rollers and a cooling station. The laminated cards meet ISO flatness specifications with composite PVC cards. Options for laminates include cutouts for magnetic stripes and smart cards, and varying degrees of holographic protection. Patches should not be applied in applications where overlay varnishes are used.

Each roll of TrueSecure varnish overlay ribbon comes configured on the Eltron patented core design with an additional take-up-core (this will eliminate from having to stock an additional item/part number for a separate take-up-core). The TrueSecure Laminate patches are also configured on a unique slot type core that utilizes a locking mechanism on the spindle of the printer that helps prevent slippage of ribbon during the lamination process. Both types of ribbons are shipped in a protective package for extended shelf life. Rolls are packaged in a sealed pouch to prevent dust particles from attaching to the ribbons and display the Eltron part number (numeric & barcode).

MaxSecure media is specifically designed for use with Eltron's Max Series line of card printers. The MaxSecure media incorporates the 3M™ Secure Card materials, which produce a card with a projected life span of 10 years. 3M™ Secure Card materials are available with 3-part media (receptor film/security substrate/receptor film) or 2-part media (receptor film/security substrate). The 3-part media consists three pieces of material, a clear receptor film (top) and a white plastic card (middle), and a clear receptor film (bottom). The 2-part media consists two pieces of material, a clear receptor film (top) and a white plastic card (bottom). In this process, the printed information is reverse-printed on the back side of the clear receptor film and then fused to the white secure card sealing the information on the inside between the two materials. The materials are thermally fused together using heat and pressure. The fused material is virtually impossible to separate without destroying the card and information printed on it.

Each roll of MaxSecure media is shipped in a protective cellophane wrapped package with the Eltron part number (numeric & barcode) for easy identification.

The chart below summarizes Eltron printing and laminating ribbons standard features, function, and competitive benefits:

Feature	Function	Competitive Benefit
Optimized chemical composition of dyes and varnish	Good UV protection	Proven longer image life
Guaranteed printer compatibility	No ribbon wrinkling, no dust, no static	Better color and image quality, no color streaks, longer printhead life, no card slippage,
Increased printer performance	Eltron supplies maintain "System Performance Integrity" and also provides complete technical support (via phone, tech notes, web site) for entire system.	"Eltron Certified Supplies" tested to optimize your card printer performance
Optimized color with guaranteed quality	Ribbon has been tested for compatibility printer/firmware/software- 100% tested and matched	High "automatic" color quality (no settings need adjustment)
Overlay varnish	Protects image from abrasion	Longer card life
System level support	Trained by Eltron - on entire operating functions of printer	Allows end user to ask questions about ribbon functions and about printer functions with one phone call.
Instant availability	Ribbon orders are available within 48 hours	Money back guarantee back by Eltron

Cleaning Supplies

Eltron offers a variety cleaning supplies that will assist in maintaining proper printer performance. The Premier Cleaning Kit consists of 50 pre-saturated cleaning cards and 25 cleaning swabs. Regular use of the cleaning cards will keep your card printer clean and maintain important parts of the printer (printhead, transport rollers, and magnetic encoder station). The cleaning swabs can be used when print anomalies appear on cards to remove visible deposits from the print head. It is important to never use a sharp object to scrape deposits from the printhead, as it may permanently damage the printhead. Cleaning cartridges are directly installed in some printers. The cleaning cartridge incorporates an adhesive roller that clean cards as they pass over the roller to ensure the highest quality print on each card. Periodic replacement of the adhesive roller and general cleaning will help to maintain optimal performance of your card printer. Eltron recommends cleaning the card printer every 1,000 cards and replacing the cleaning roller of the cleaning cartridge every 1,000 cards if used daily. If printer is used periodically, replace cleaning roller at least every four months. For further cleaning instructions and recommendations refer to printer User' Manual.

Card Printer Ribbon Selection Guide

	Product Description	Printer Support	Technology	Cards
Ribbons				
Monochrome	Monochrome ribbons available in 8 different colors.	P310C/F, P400, P420, P500, P520, P600	Thermal Transfer	10*Mil - 44 Mil 30 Mil w/ P500 10* Mil - 60 Mil w/P310, P420
6 Panel (YMCKOK)	Used to print full color with overlay on one side and black on the other side.	P400, P420, P500**, P520**, P600	Dye Sublimation Thermal Transfer	10*Mil - 44 Mil 30 Mil w/ P500
5 Panel (YMCKO)	Used for printing full color cards.	P310C, P400, P420, P500**, P520**, P600	Dye Sublimation Thermal Transfer	10*Mil - 44 Mil 10* Mil - 60 Mil w/P310, P420
4 Panel (YMCK)	Used for full color printing before the overlaminate is applied.	P500, P520	Dye Sublimation Thermal Transfer	30 Mil
2 Panel (K dye O)	Used for printing photographs or images that require grayscale (shades of black).	P310C, P400, P420, P500**, P520**, P600	Dye Sublimation	10*Mil - 44 Mil 30 Mil w/ P500 10* Mil - 60 Mil w/P310, P420
2 Panel (K resin O)	Used for bar code printing or any application requiring true black.	P310C, P400, P420, P500**, P520**, P600	Thermal Transfer	10*Mil - 44 Mil 30 Mil w/ P500 10* Mil - 60 Mil w/P310, P420
5 Panel (YMCKK)	Used for printing full color on front & black resin on back before the lamination is applied.	P500, P520	Dye Sublimation Thermal Transfer	30 Mil
3 Panel (YMC)	Used for printing full color with P500 Overlaminate or with P600 with KO on station 2.	P500, P520, P600	Dye Sublimation	10*Mil - 44 Mil 30 Mil w/ P500
Overlay Varnishes				
Clear	3-4 microns thick. Provides extra protection from UV damage and scratching.	P310C/F, P400, P420, P600	Thermal Transfer	10*Mil - 44 Mil 10* Mil - 60 Mil w/P310, P420
Genuine Secure Hologram	Hologram "Genuine" from one angle and "Secure" from another.	P310C/F, P400, P420, P600	Thermal Transfer	10*Mil - 44 Mil 10* Mil - 60 Mil w/P310, P420
Pcards Hologram	Hologram image is of plastic cards fanned into a circle.	P310C/F, P400, P420, P600	Thermal Transfer	10*Mil - 44 Mil 10* Mil - 60 Mil w/P310, P420
Pcards Hologram (laminating station)	Hologram image is of plastic cards fanned into a circle.	P500, P520	Hot Roll Laminator	10* Mil - 44 Mil
P500/P520 Overlaminate Patches (for cards that need to last >2 years)				
Clear	1 mil & 0.6 mil patch for highly durable cards.	P500, P520	Hot Roll Laminator	30 Mil
Pcards Hologram	1 mil & 0.6 mil patch material with a hologram image that is plastic cards fanned into a circle.	P500, P520	Hot Roll Laminator	30 Mil
Pcards Gold Secure	1 mil patch material with a gold seal. The highly visible gold seal is the cards fanned into a circle.	P500, P520	Hot Roll Laminator	30 Mil

*10 Mil cards are not recommended for full color card printing. Good for small pictures, logos, color text.
O-panel is not used with the P500/P520 Overlaminate. 30 mil = 0.76 mm, 10 mil = 0.25 mm

Ribbon Shelf Life Information

Storage. . . . .

Avoid storing ribbons in the following places:

- Exposure to direct sunlight
- High temperatures and high relative humidity
- Near heat source
- Near the organized solvent and the diazo copy machine

Usage . . . .

- Avoid touching the printing surface of ribbons as it may cause blotchy printing
- Avoid any contamination during the loading of ribbons, as contamination can cause a print void

Package Assurance. . . . .

Ribbons stored following these guidelines will maintain their properties within allowance. Assurance for an extended period of time is valued by an accelerated examination. A ribbon stored at room temperature is regarded as reference.

- Ribbons shall be individually packed in sealed pouches
- Pouches shall be put into a box

Ribbon Environmental Requirements . . . .

TrueColours™ Monochrome Resin Ribbons					
Part Number	**Description**	**Storage Time**	**Storage T°C**	**Humidity**	*Light*
800015-101	Black – 1000 images	1 year	+5 to +35°C	< 80 %	N/A
800015-102	Red – 1000 images	1 year	+5 to +35°C	< 80 %	N/A
800015-103	Green – 1000 images	1 year	+5 to +35°C	< 80 %	N/A
800015-104	Blue – 1000 images	1 year	+5 to +35°C	< 80 %	N/A
800015-105	Yellow – 1000 images	1 year	+5 to +35°C	< 80 %	N/A
800015-106	Gold – 1000 images	2 years	+5 to +30°C	None	N/A
800015-107	Silver – 1000 images	2 years	+5 to +30°C	None	N/A
800015-109	White – 1000 images	1 year	+5 to +35°C	25 to 80%	N/A
800015-185	Scratch-Off Gray – 1000 images	Unknown	+0 to +40°C	Unknown	Dark Place
800015-301	Black – 1500 images	1 year	+5 to +35°C	< 80 %	N/A
800015-302	Red – 1500 images	1 year	+5 to +35°C	< 80 %	N/A
800015-303	Green – 1500 images	1 year	+5 to +35°C	< 80 %	N/A
800015-304	Blue – 1500 images	1 year	+5 to +35°C	< 80 %	N/A
800015-305	Yellow – 1500 images	1 year	+5 to +35°C	< 80 %	N/A
800015-306	Gold – 1500 images	2 years	+5 to +30°C	None	N/A
800015-307	Silver – 1500 images	2 years	+5 to +30°C	None	N/A
800015-309	White – 1500 images	1 year	+5 to +35°C	25 to 80%	N/A

Ribbon Environmental Requirements . . . .

TrueColours™ Printing Ribbons					
Part Number	*Description*	Storage Time	Storage T°C	Humidity	*Light*
800015-148 800015-348	6 Panel Color Ribbon YMCKOK	1 year	< 25°C	35 to 65%	Dark Place
800015-140 800015-340	5 Panel Color Ribbon YMCKO	1 year	< 25°C	35 to 65%	Dark Place
800015-180 800015-380	5 Panel Color Ribbon YMCKK	1 year	< 25°C	35 to 65%	Dark Place
800015-145 800015-345	4 Panel Color Ribbon YMCK	1 year	< 25°C	35 to 65%	Dark Place
800015-170 800015-370	3 Panel Color Ribbon YMC	1 year	< 25°C	35 to 65%	Dark Place
800015-150 800015-350	2 Panel Black Ribbon Kdye + O	1 year	< 25°C	35 to 65%	Dark Place
800015-160 800015-360	2 Panel Resin Ribbon KResin + O	1 year	< 25°C	35 to 65%	Dark Place

TrueSecure Overlay Varnishes					
Part Number	Description	Storage Time	Storage T°C	Humidity	*Light*
800015-120	Genuine Secure Hologram 350 cards	3 years	+21° to 26°C	30 to 50%	N/A
800015-121	Pcard Hologram 350 cards	3 years	+21° to 26°C	30 to 50%	N/A
800015-122	Clear 350 cards	3 years	+21° to 26°C	30 to 50%	N/A
800015-125	Pcard Hologram for P500/P520 350 cards	3 years	+21° to 26°C	30 to 50%	N/A
800015-131	Clear for P500/P520 350 cards	3 years	+21° to 26°C	30 to 50%	N/A

Ribbon Environmental Requirements . . . .

TrueSecure - 1 mil P500/P520 Laminate Patches					
Part Number	**Description**	**Storage Time**	**Storage T°C**	**Humidity**	*Light*
800015-012	Clear with coverage for Mag Stripe Cards 100 cards	18 months	20°C to 25°C	45%	N/A
800015-013	Clear with coverage for Smart Cards 100 cards	18 months	20°C to 25°C	45%	N/A
800015-014	Clear with full coverage 100 cards	18 months	20°C to 25°C	45%	N/A
800015-015	Hologram Pcard Image 100 cards	18 months	20°C to 25°C	45%	N/A
800015-017	Advantage Seal Pcard patch 90 cards	18 months	20°C to 25°C	45%	N/A
800015-031	Clear Mixed (Full & Mag Stripe) 100 patches (50 dual sided cards)	18 months	20°C to 25°C	45%	N/A

TrueSecure - 0.6 mil P500/P520 Laminate Patches					
Part Number	**Description**	**Storage Time**	**Storage T°C**	**Humidity**	*Light*
800015-135	Clear with full coverage 175 cards	1 year	+5° to 25°C	10 to 50%	N/A
800015-136	Clear with coverage for Smart cards 175 cards	1 year	+5° to 25°C	10 to 50%	N/A
800015-137	Clear with coverage for Mag Stripe Cards 175 cards	1 year	+5° to 25°C	10 to 50%	N/A
800015-138	Hologram Pcard Image 170 cards	1 year	+5° to 25°C	10 to 50%	N/A