



Durability Solutions for Your Instant Issuance Card Program

Instant Financial Issuance Durability Guide



ENTRUST

SECURING A WORLD IN MOTION






Innovation demands durability

Credit and debit cards continue to be the preferred way to pay for billions of people globally, and it is no wonder: They look better, last longer, and work faster than ever before. But with this innovation comes increased cost per card issued, and that is why Entrust is constantly evolving to meet the moment with best-in-class supply offerings as a part of the Instant Financial Issuance solution. From sleek metallics to bright, bold full-panel design printing and everything in between, we have a range of solutions that fit your brand, budget, and cardholders' expectations.

Usage is just one factor that impacts card durability. The following factors all contribute to card lifespan:

Usage and Construction:

 <p>Card Substrate The card's construction</p>	 <p>Personalization Technology Supplies and hardware used, machine settings</p>	 <p>Storage Wallet, purse, vehicle dashboard, etc.</p>
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Environmental Factors:





 <p>Chemical Resistance Image degradation, embrittlement</p>	 <p>Adhesion Overlay and card delamination, image degradation and removal</p>	 <p>Abrasion Resistance Overlay and personalization removal, image degradation</p>	 <p>Moisture Resistance Card delamination, bubbling, image degradation</p>	 <p>UV Resistance Card and image fading, card embrittlement</p>
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Many issued cards face a combination of several of these factors in varying degrees. The overall effect on the card can result in high card failure rates — leading to costly re-issuance.

A closer look at card lifespan

To get an idea of the average lifespan for your card program, you need to consider the typical usage, the level of required functionality for transaction capability, and exposure levels that your card will face on a regular basis. We recommend considering all of the elements that impact your card program and selecting the appropriate level of protection based on your specific needs.

Based on the types of usage and exposure a card may experience, the chart on the following pages can help you determine the durability options that best suit your card program.

Card Functionality/Exposure			
	Low	Medium	High
 <p>Handling</p>	Rarely used in transactions such as a magnetic stripe or smart card reader. Infrequent handling, exposure to sunlight or finger oils.	Average exposure to sunlight, finger oils, and transaction contact (such as a magnetic stripe or smart card reader).	Frequent contact with transaction terminals or regularly exposed to finger oils, sunlight, or abrasion from items stored nearby (such as coins or keys).
 <p>Storage</p>	Rarely carried on a person on a daily basis. Often stored in an additional storage product (such as a Tyvek card pouch).	May be carried on a person, but stored in a protected environment, such as a wallet.	Often carried on a person and ready for immediate use or stored loosely in a pocket with coins, keys, or other items.
 <p>Frequency</p>	Typically only used a few times per year.	Used occasionally (weekly).	Used frequently (daily).
 <p>Readability</p>	Cards can still be accepted even if the printing has significantly deteriorated.	Cards can still be accepted even if some of the printing has deteriorated.	The need for the personalized card print detail is a critical factor for authentication.

DURABILITY SOLUTION

CARD LIFE AT VARYING FUNCTIONALITY/EXPOSURE

HIGHLIGHTS

1	2	3	4	5	6	7	8	9	10
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Recommended Printers Direct-to-Card Print Technology with Sigma DS, CD, and CE Series Desktop Financial Issuance Card Printers



Sigma DS4-ES

TOPPING FOIL ON EMBOSSED CARDS

Topping foil color is a decorative foil product for adding color over the embossed characters. The foil color on the card is subject to abrasion. Table references the topping foil card life. The embossed characters on the card alone offers high durability.



Low
Medium
High

Topping foil accepted by payment industry for enhancing appearance of embossed characters at time of card issuance.

METALLIC MONOCHROME PRINTING

Applicable for metallic silver and metallic gold for printing (without a topcoat) of text, logos, or branding information.



Low
Medium
High

Performance tested as per ANSI INCITS 322-2015



Sigma DS4

BLACK MONOCHROME PRINTING

Applicable for black as the most common color choice for monochrome printing (without a topcoat) of text, logos, or branding information. Durability of white and other colors (without a topcoat) will be lower.



High

Performance tested as per ANSI INCITS 322-2015

BLACK MONOCHROME PRINTING + T-PANEL (KT Ribbon)

Near edge-to-edge clear topcoat film in single layer coverage over monochrome printing of text, logos, or branding information. Durability of other panel ribbon colors such as silver or gold will be lower.



Low
Medium
High

Performance tested as per ANSI INCITS 322-2015



Sigma DS4-LCM

UV-CURABLE BLACK MONOCHROME PRINTING*

Strong durability solution in a single product. UV-curable black monochrome printing bonded to the card with Durable Graphics Technology. Applicable for printing of text, logos, or branding information. Durability of white will be slightly lower.



Low
Medium
High

Performance tested as per ANSI INCITS 322-2015

UV-CURABLE METALLIC MONOCHROME PRINTING*

Strong durability solution in a single product. Metallic gold and metallic silver UV-curable ribbon printing bonded to the card with Durable Graphics technology. Applicable for printing text, logos, or branding information.



Low
Medium
High

Performance tested as per ANSI INCITS 322-2015

SILVER + T-PANEL PRINTING (ST-KT Ribbon)

Near edge-to-edge clear film in single layer coverage over silver mono-panel printing for front card and single layer film coverage over black mono-panel printing for back card. Table references front side card life.



Low
Medium
High

Performance tested as per ANSI INCITS 322-2015

SILVER + T-PANEL + T-PANEL PRINTING (ST-KT Ribbon)* APPLYING STT FRONTSIDE & K BACKSIDE

Near edge-to-edge clear film in double layer coverage over silver mono-panel printing for front card and black mono-panel printing for back card with no T-panel coverage. Table references frontside card life.



Low
Medium
High

Performance tested as per ANSI INCITS 322-2015



Sigma DS4

BLACK + T-PANEL x2 PRINTING (KTT Ribbon)

Near edge-to-edge clear film in double layer coverage over black monochrome printing for printing of text, logos, or branding information. Durability of white will be lower.



Low
Medium
High

Performance tested as per ANSI INCITS 322-2015

FULL COLOR + T-PANEL (YMCKT) SIMPLEX PRINTING

Near edge-to-edge topcoat in a single layer coverage over dye color and black resin printing.



Low
Medium
High

Performance tested as per ANSI INCITS 322-2015

*Printing solutions available for Sigma DS series printers only

DURABILITY SOLUTION

CARD LIFE AT VARYING FUNCTIONALITY/EXPOSURE

HIGHLIGHTS

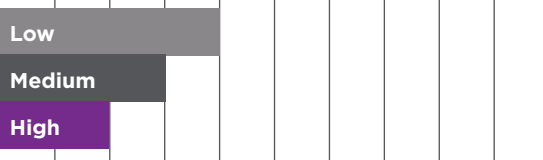
1	2	3	4	5	6	7	8	9	10
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Recommended Printers Direct-to-Card Print Technology with Sigma DS, CD, and CE Series Desktop Financial Issuance Card Printers



Sigma DS4

FULL COLOR + T-PANEL + BLACK + T-PANEL (YMCKT-KT) DUPLEX PRINTING
Near edge-to-edge topcoat in a single layer coverage over dye color and black resin printing of front card and single layer topcoat over black resin printing for the back card.



Performance tested as per ANSI INCITS 322-2015

FULL COLOR + T-PANEL + T-PANEL DUPLEX PRINTING (YMCKT-KT) Applying YMCKTT frontside & K backside
Near edge-to-edge topcoat in a double layer coverage over dye color and black resin printing of front card and black resin printing for the back card. Table references frontside card life.



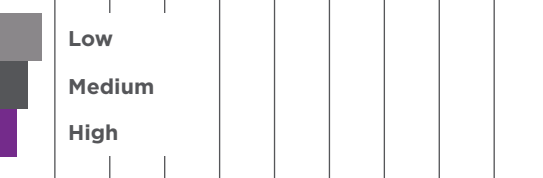
Performance tested as per ANSI INCITS 322-2015

Recommended Printers Retransfer Pigment Ink Print Technology with Artista CR825/CE875 Series Desktop Printers



Artista CE875

TOPPING FOIL ON EMBOSSED CARDS
Topping foil color is a decorative foil product for adding color over the embossed characters. The foil color on the card is subject to abrasion. Table references the topping foil card life. The embossed characters on the card alone offers high durability.



Topping foil accepted by payment industry for enhancing appearance of embossed characters at time of card issuance.



Artista CR825

FULL COLOR + FILM x1 PRINTING (CMYKP + 1 FILM)
True edge-to-edge retransfer film single layer coverage over color pigment panel printing.



Performance tested as per ANSI INCITS 322-2015

FULL COLOR + FILM x2 (CMYKP + 2-FILM)
True edge-to-edge retransfer film two layer coverage over color pigment panel printing.



Performance tested as per ANSI INCITS 322-2015

Estimated card life based on the following:

- PVC substrate with polish finish.
- Direct-to-card printing consists of preprinted card substrate with variable personalization.
- Retransfer printing consists of blank white substrate/or minimal preprinted substrate and card personalized with full-color printing. Some card edgewear is considered market acceptable.
- Card life assumptions are based on combination of laboratory testing and real-life experiences.

Metallic gold and metallic silver ribbon options offer extremely high print quality with a shiny metallic appearance and a high degree of opacity. In addition, metallic UV-curable ribbons show comparable performance to the black and white UV-curable ribbons in key performance metrics such as print opacity, chemical resistance, plasticizer resistance, and cross hatch performance. However, because of differences in design and ribbon construction, traditional metallic graphics ribbons have a lower level of abrasion durability performance when compared to the traditional black and white matte graphics ribbons. Similarly, metallic gold and metallic silver UV-curable graphics ribbons also have a lower level of abrasion durability performance when compared to the excellent performance of the matte black and white UV-curable graphics ribbons.

Note: ANSI INCITS 322-2015: Industry standard guidance on performance test methods for card durability.
ISO 24879: Industry standard guidance on performance test methods for card service life.

Give your consumers the benefit of extended card life by adding durability.

Issuing durable cards that stand up to life's demands has always been a crucial component of any card program. But with increased issuance costs due to the rise of EMV smart cards, issuing long-lasting cards is more important than ever. With Entrust solutions, which have been used to personalize tens of millions of the most modern payment cards in circulation today, you can produce, print, and personalize vibrant, durable cards that build consumer loyalty and ensure successful, secure transactions.

For more information

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ABOUT ENTRUST CORPORATION

Entrust keeps the world moving safely by enabling trusted experiences for identities, payments, and digital infrastructure. We offer an unmatched breadth of solutions that are critical to enabling trust for multi-cloud deployments, mobile identities, hybrid work, machine identity, electronic signatures, encryption, and more. With more than 2,800 colleagues, a network of global partners, and customers in over 150 countries, it's no wonder the world's most entrusted organizations trust us.

Learn more at
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