



Liquid crystal ink: Design feature shaping the future of payment cards

Innovative thermo-reactive ink boosts card design and customer experience.

PAYMENT

POSTED ON 02.18.25

IDEMIA Secure Transactions (IST) has unveiled a patented thermo-reactive Liquid Crystal Ink that transitions from black to a dynamic multicolor hue. Used in the fashion industry, this innovative technology is now available as a distinctive design feature for payment cards.

Design as a Strategic Advantage in Banking

In today's ever-evolving financial landscape, the importance of card design cannot be overstated. Financial institutions must innovate to stay ahead and provide unique value propositions to end users—making design play a critical component in issuer strategies and the payment card industry.

According to a 2023 consumer survey conducted by IDEMIA Secure Transactions with Dentsu Insights, 72% of 3,100 respondents across 12 global markets said that design matters in choosing their payment cards. This trend underscores the need for issuers to adopt forward-thinking design strategies to attract and retain customers.

Revolutionary Thermo-Reactive Liquid Crystal Ink

Thermo-reactive Liquid Crystal Ink is a specialized ink that changes color based on temperature variations. Several temperature-activation ranges are available. Drawing from techniques pioneered in the fashion industry by hair colorists and fashion designers, Liquid Crystal Ink creates an optical phenomenon known as constructive interference where two light waves reinforce each other to produce multiple colors.

Similar to the iridescent sheen of peacock feathers, the ink displays a range of reflections to give the illusion of a shimmering color palette.

Transforming the Customer Payment Experience

By incorporating IDEMIA Secure Transactions' advanced inks and printing techniques, issuers can create payment cards that truly embody their brand identity while appealing to trendsetter customer segments. Unique, personalized card designs foster a stronger emotional connection with customers, increasing satisfaction and loyalty while drawing in new consumer bases. These stand-out cards are a top-of-wallet choice customers can be proud to use.

By leveraging thermo-reactive Liquid Crystal Ink and other strategic design capabilities, IDEMIA Secure Transactions empowers its customers to stand out in a highly competitive market, ensuring both a distinct market advantage and adaptability to evolving industry demands.