AGENCY SHOP LTD
INK RIBBON PAPER COMPANY, UK
TEL: +44 (0) 2085171256;
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Polycarbonate Card & Over-Laminate Films

Key Features & Benefits.

- Virtually unbreakable. High impact & tensile strength and long term durability of over 10 years.

- Unique processing characteristics. Optimised surface textures for text & graphics printing, die cutting, hot stamping/embossing and lamination.
- Superb lay flat, and strong bond between film layers. Low shrinkage before or after lamination of films (layer by layer) or application on a substrate. No adhesive is required for the application. Simply use heat and pressure to join all layers together, and they cannot be pulled apart without delamination & tamper-evidence.
- Ideal for embedding, applying, and hiding several unique overt & covert security features at any stage of production or lamination.
- Inherently UV secure. For example, when invisible fluorescent inks are used, the authenticity of the substrate (card, passport page, etc) can be validated simply by exposing it to UV light. Text & images printed are invisible under normal light but visible under UV light. And whilst UV images in such documents cannot be copied or duplicated, their level of security can be increased by combining inks of different colours within a layer in them.
- Extremely receptive to advanced digital print personalisation technologies, including document biometric content and cryptographic secure data (e.g., RFID chips & antennas). [With eCard or biometric card production, you can choose your special content/digital data and apply them on any layer and at any stage of production/lamination to avoid alteration attacks]
- High optical clarity for optical electronic personalisation processing (embossing, engraving, TT) of documents
- Flexibility in choice of film enables flexibility in printing. First and or second layer films may be printed separately and then assembled during the production process.
- Excellent print colours with no loss of depth or vividness in second surface printing.
- Resistant to deterioration from light/climate exposure and will not yellow with time.
- Chemical and high temperature resistant. Excellent dimensional stability, and will not wrap even after exposure to high temperature (145°C).
- Eco-friendly. No toxic waste even on incineration. Mainly water and CO2 produced
- Compatible with a diverse range of materials (including holographic imaging films and 100% cotton paper) as well as regular security printing processes & inks
- Coated & uncoated over-laminate film options. Offer laser markable or embossable or hot stampable options for further protection and opportunity to add more overt & covert security elements to a document. The strong bond between the overlay laminating film and its substrate provides a durable protective barrier that extends the life of the substrate. .

- Laser markable/engravable options. Glass-clear clarity. Enable sharp indelible tamper-resistant images/prints to be 'engrained' in the film during the marking process, thus rendering it anti-counterfeit. The mark or image generated is tamper-evident because the image displays as shades of dotted grey/brown (that is, burnt carbon created by heat from the laser during the engraving process).
- White opaque film options (AM101-2SPW). Promote outstanding image legibility and enable extremely high image visibility against the white background.

Printing Processes & Inks

Ease to print. Can be printed on both sides, subject to application & technology. Compatible printing technologies include:

- Dye Sublimation & Resin Thermal Transfer & Retransfer Printing
- Offset Litho Printing
- Laser Engraving (if applicable)
- Embossing (if applicable)
- UV-sensitive & Infrared Printing
- Hot Foil Stamping (if applicable)
- Guilloche & Relief Printing
- Laser Perforation & Etching
- Microprinting
- Laminating Process (standalone, in-line, built-in equipment)
- Microchip Processing

- Digital Presses
- Screen Printing

Compatible Inks include:

- Optical variable inks
- Dye & resin thermal transfer ribbons (including, MICR & invisible UV thermal transfer printing)
- Inkjet Inks (e.g., conventional solvent, invisible UV fluorescent, Infra-Red Fluorescent and UV curing coding/Packaging)

Applications

- Solid Polycarbonate Cards, from layers of films without adhesive. [The films are simply laminated together, firmly & securely, to form your solid multi-layered polycarbonate card. The construction may vary but, usually, comprise a clear transparent top and a bright opaque white base for high contrast image legibility and personalisation].
- Hybrid Cards (Polycarbonate film on Teslin inlay, enabling even greater flexibility)
- Passport personalisation data page over-laminate (Biodata page over-laminate)
- Driving licence over-laminate
- Identity security card over-laminate (Polycarbonate cards & Teslin cards)
- Other security document over-laminate
