YIKO CERTIFICATE SECURITY TECHNOLOGY BROCHURE

Security Certificate Solutions

Shantou Yiko Anti-Counterfeit Technology Co., Ltd.
Your Trusted Local Anti-Counterfeiting Expert!

Top Anti-Counterfeiting Solutions Provider

COMPANY PROFILE

Shantou Yiko Anti-Counterfeiting Tech Co., Ltd.

Founded in 2014, we're a professional anti-counterfeiting solutions provider, focusing on R&D, production and sales of holograms, labels, certificates, cards and packaging anti-counterfeiting prints.

We master 100+ anti-counterfeiting processes (watermark, UV fluorescence, intaglio printing, holographic hot stamping, etc.) and keep innovating advanced technologies.

Based in Shantou (Guangdong), we have mature tech, skilled teams and strict quality control. Guided by "reliable, cost-effective, easy-to-identify, hard-to-counterfeit", we partner with global brands–protecting them from fake product losses.

20+yr.

Shantou Yiko Anti-Counterfeiting Technology Co., Ltd. was founded in 2014. Leveraging over 20 years of industry experience in the anti-counterfeiting field, we focus on providing high-difficulty anti-counterfeiting solutions.

1500 m²

Covering an area of 1,500 m², our factory is equipped with a professional production system, capable of undertaking R&D and mass production of various anti-counterfeiting printed products.

8000w

With multiple automated production lines, our factory has an annual production capacity of up to 80 million pieces (units), enabling efficient response to large-scale order demands.

COOPERATION PARTNERS

Our business partners cover major markets worldwide.

CONTENTS

01

UV FLUORESCENCE

Technical Features

Invisible fluorescent ink is an important anti-counterfeiting technology, whose core function is to achieve covert anti-counterfeiting through its special optical properties.

-Covert identification marks to prevent visual counterfeiting.
-Exclusive information loading for personalized anti-counterfeiting.
-Rapid verification for improved anti-counterfeiting efficiency.
-High technical threshold, resistant to mass counterfeiting.

01 Basic Monochrome Fluorescent Colors (Most Commonly Used)

Red Fluorescence

It instantly emits bright pure red fluorescence under ultraviolet light, featuring zero impurities, no halo effect, and strong penetration

Yellow Fluorescence

It exhibits bright yellow fluorescence under ultraviolet light, featuring vivid color and high contrast, and remains clearly luminous even in weak UV light.

Blue Fluorescence

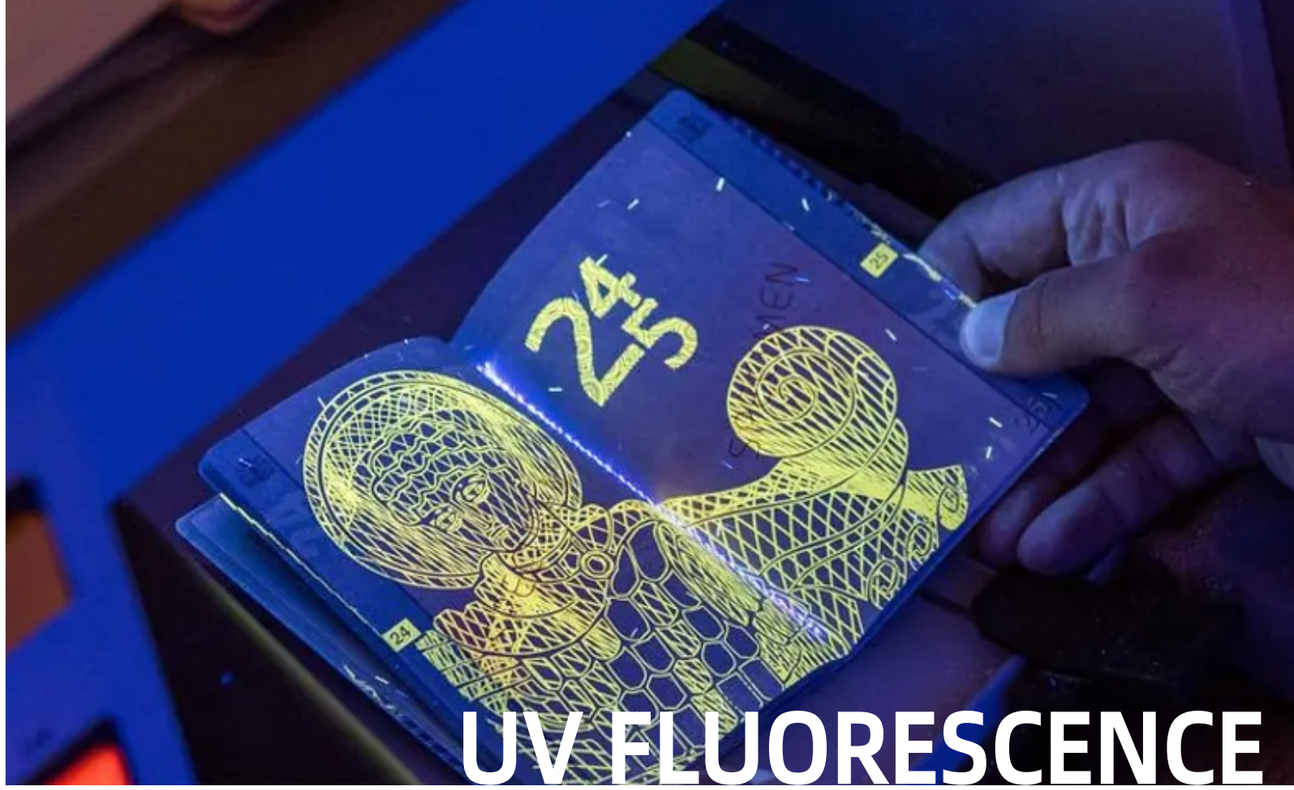
It emits pure blue or blue-white fluorescence under ultraviolet light, with soft and non-dazzling rays, uniform luminescence, and no local brightness variations.

Green Fluorescence

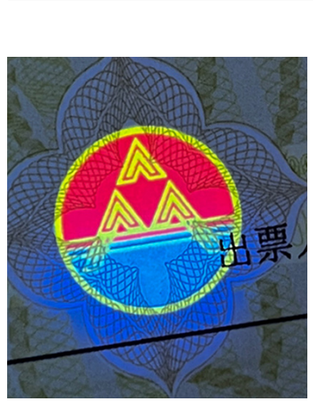
It emits bright, high-intensity green fluorescence under ultraviolet light. Featuring pure, non-dazzling color, it is often paired with red to form a multi-layered anti-counterfeiting mark.

Orange Fluorescence

It appears colorless or very pale orange under natural light, boasting a subtle and premium texture without being obtrusive. Under ultraviolet light, it emits bright warm orange fluorescence with a unique hue (between red and yellow), delivering soft visual effects and high distinguishability.

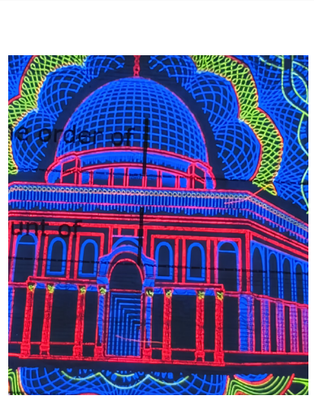


02 Composite Fluorescent Colors (Multi-Color Blend)



Two-Color Fluorescent Overprinting

The combination of two colors creates richer fluorescent effects. For example, the superposition of "red + yellow", "green + blue" and "red + blue" results in different colors in local areas due to varying mixing ratios.

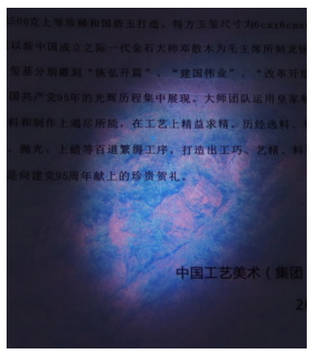


Multi-Color Fluorescent Overprinting

The blending of three or more colors delivers richer fluorescent effects. For instance, the superposition of combinations like "red + yellow + blue" and "yellow + green + blue" results in varying colors in local areas depending on the mixing ratios.

Gradient Composite Fluorescence

Two or more primary colors are blended gradually in proportion, presenting a smooth color transition under ultraviolet light, such as yellow → green → blue and red → orange → yellow, with a layered visual effect.



Color Fluorescent Ink Printing

It refers to using special inks with fluorescent pigments/dyes in printing, which gives printed graphics conventional colors under natural light and vivid fluorescent hues when exposed to UV light of specific wavelengths.

02

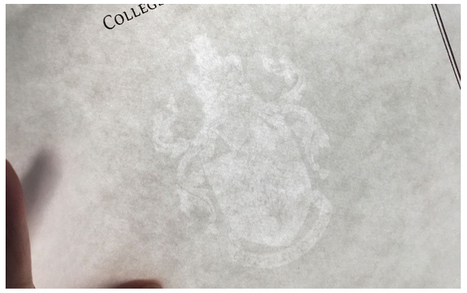
SECURITY WATERMARK

Technical Features

A core invisible anti-counterfeiting tech for paper certificates: security watermarks form light-shade differences via pulp fiber density adjustment in papermaking, observable under transmitted/side light, with high replicability difficulty, moderate cost and no aesthetic impact.

-Invisible/semi-invisible properties with high concealment.
-Physically embedded, non-tamperable and non-removable.
-High replication threshold, superior anti-counterfeiting.
-Easy to identify, no professional tools required.

01 Classification of Security Watermarks



White Watermark

Visual Effect: When viewed against the light, the pattern appears milky white/high-brightness white with a dark background; it is completely invisible when viewed head-on and has better concealment than black watermarks.

Advantages: High visibility; suitable for thick paper/dark paper/ laminated paper; harder to counterfeit than black watermarks.

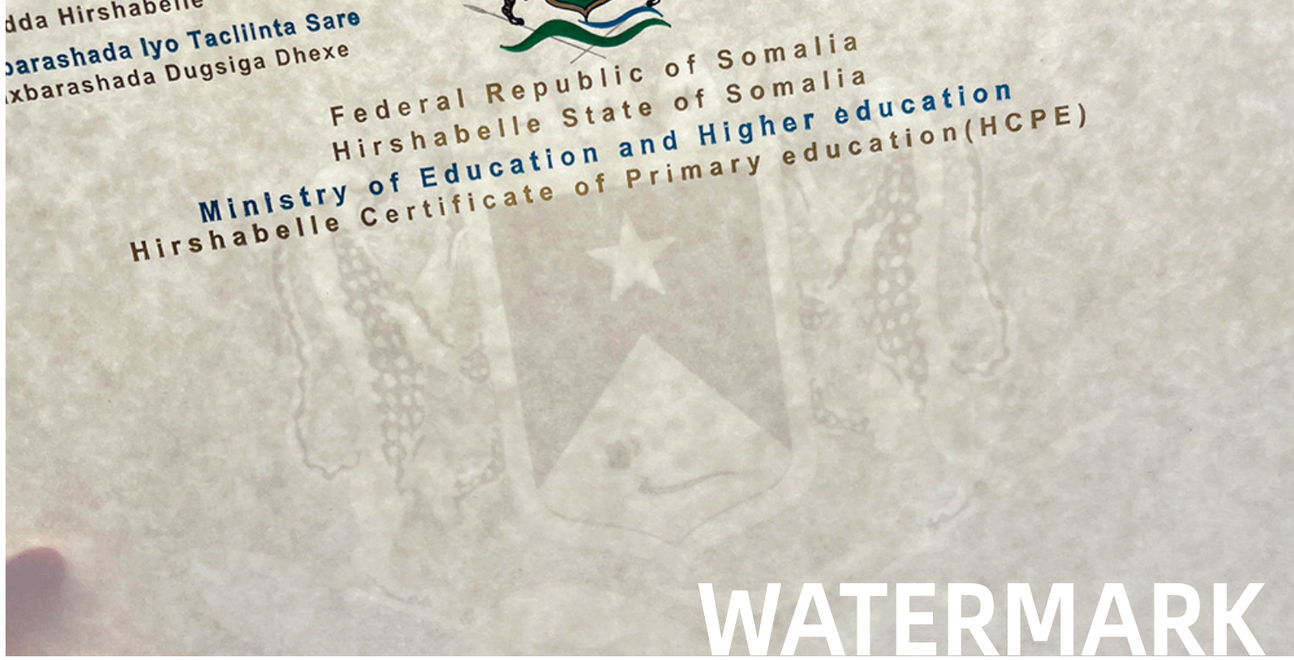
Black Watermark

Visual Effect: When viewed against the light, the pattern appears grayish black/dark against a light background (the paper's natural color); it is basically invisible when viewed head-on and does not interfere with printed content.

Advantages: Simple process, low cost, and high efficiency in mass production.

Black and White Watermarks

Visual Effect: When viewed against the light, the pattern shows an alternating light and dark 3D embossed effect, with optimal visibility and anti-counterfeiting performance.
Advantages: High unreplicability, prominent premium visual appeal, and it is a top-tier anti-counterfeiting technology.



02 General-Purpose Watermark

Diamond Watermark

The surface features a regular diamond grid security watermark with clear textures when viewed against the light. It serves both as decoration and an auxiliary anti-counterfeiting measure

Plum Blossom Watermark

The paper has a built-in plum blossom-shaped security watermark (a pulp density pattern embedded during papermaking), with clear flower outlines visible when viewed against the light.

White Chrysanthemum Watermark

Built-in chrysanthemum security watermark (pulp density pattern, embedded in papermaking) - clear outlines when viewed against light

Panda Watermark

The paper features a built-in security watermark with regularly distributed "panda and bamboo" patterns, which show clear outlines and natural details when viewed against the light.

03 Custom-Watermarked

Brand Logo Watermark

Brand logo watermarks are ideal for enhancing brand recognition while providing anti-counterfeiting protection.

Text Watermark

Text watermarks often contain anti-counterfeiting codes or official slogans for verification.

03

HOT STAMPING HOLOGRAPHIC

Positioning hot-stamped holography (holography + high-precision hot stamping): uses special holographic foil & high-precision equipment for accurate stamping on anti-counterfeiting certificates, enhancing anti-counterfeiting performance and texture

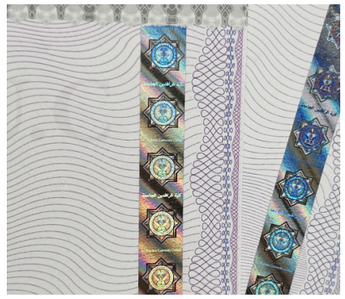
01 Classification of Hot Stamping Holographic

Regular-Shaped Hot Stamping Holographic

Hot-stamp holographic anti-counterfeiting film into regular geometric areas; enables exclusive effects (light change, dynamic texture).

Special-Shaped Hot Stamping Holographic

Custom shape-matched, temperature/pressure-controlled hot-stamping of holographic film onto certificates; special-shaped areas show anti-counterfeiting effects.



Hot-Stamped Holographic Strip

Strip-based hot-stamping of holographic light-changing film onto certificate strips; enables anti-counterfeiting effects.

02 Effects of Combined Hot-Stamped Holography Technology

Holographic + Aluminum Washing

A holographic pattern layer is formed on the surface of the anti-counterfeiting certificate via positioning hot stamping, followed by selective etching of the layer using the aluminum washing process to retain the core anti-counterfeiting area and remove excess metal layers.

Holographic + Serial Codes

A composite anti-counterfeiting solution integrating optical physical anti-counterfeiting and digital traceability anti-counterfeiting, whose core is the precise binding of the exclusive optical characteristics of holographic patterns to unique anti-counterfeiting serial codes.

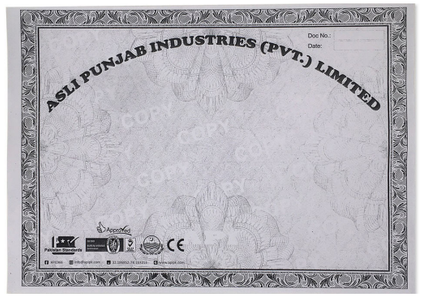
Shantou Yiko Anti-Counterfeit Technology Co., Ltd.

04

ANTI-COPYING EFFECT

Specialized copy-revealed text paper consists of paper, pre-printed textures and text. Printing source files on it results in warning words (e.g., "VOID", "COPY") showing up in copy backgrounds, enabling clear differentiation between originals and copies.

Before Copying



After Copying

Classification of Anti-copying Technologies

Copy-Revealed "COPY"

After scanning and copying via a copier, warning text or patterns (e.g., "COPY", "Invalid Copy") will automatically appear, preventing unauthorized duplication.

Copy-Revealed "VOID"

The hidden mark on the anti-counterfeiting certificate will automatically display the word "VOID" (meaning "invalid") during copying,.

Copy-Revealed Custom Text

Through special printing processes like hybrid screening, custom text is hidden in the certificate. It will appear clearly after copying.

05

OPTICALLY VARIABLE INK

Technical Features

a core anti-counterfeiting material for security certificates, realizes quick authentication and high-threshold anti-counterfeiting via color variation under specific conditions, balancing daily verification convenience and overall anti-counterfeiting performance.

-Clear trigger conditions and convenient identification methods
-High technical barriers and high replication difficulty
-Strong compatibility, fits multi-scenario certificate use
-Outstanding anti-alteration capability and strong traceability

01 Optically Variable Ink Effect

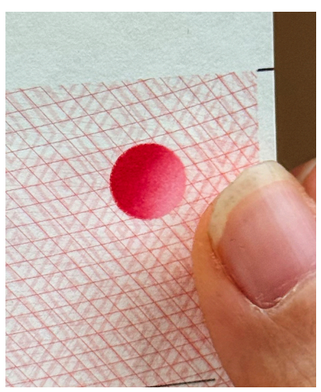
Two-Color Switching Type

It displays two contrasting colors at two fixed angles, with no intermediate transition color.As shown in the image: It appears red when viewed vertically, and turns green when tilted at 45° .

Multi-Color Gradient Type

The color shows a continuous gradient effect as the viewing angle changes, enabling smooth switching between 3 or more colors.As shown in the image: Green → Blue → Purple → Red

02 Thermochromic Ink Effect



Low-Temperature Thermochromic Ink

The color-changing temperature is set at 26-33℃, matching the temperature range of human palms. When touched, the inked area will fade to colorless once it reaches the color-changing threshold; as it cools down after being removed from contact, the color will recover instantly.

High-Temperature Thermochromic Ink

Its color-changing temperature is mostly 50-70 ° C, requiring high-temperature tools like a lighter. After heating with a lighter at high temperature, the color fades to colorless; when the lighter is removed and the temperature drops back, the original color is quickly restored.

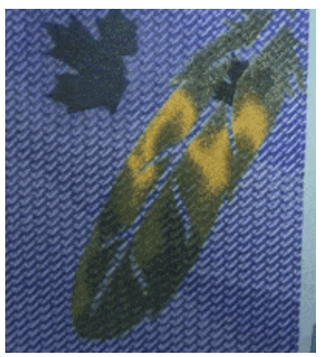
03 Magnetic Color-Changing Ink Effect

Rolling-Bar

Based on the number of external light sources, 1-3 linear columns will appear in the pattern, creating a strong 3D effect. These columns move up/down, left/right, or tilt as the light or viewing angle changes.

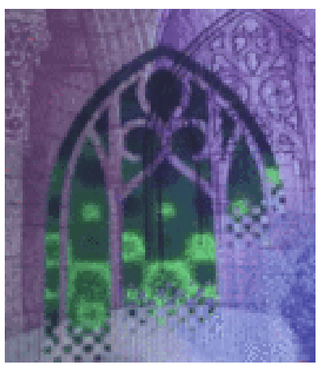
TRUSPIN

It features a single or double ring rotating around the center, showing a distinct 3D effect. The two rings move on different planes.



Sandune

During the movement of the product, it presents a visual effect similar to flame combustion. It combines the static flame shape design with dynamic flame effects that change with the viewing angle.



Openform

It has a diffuse visual effect without fixed boundaries. It can transform into different patterns/frames and display a diffuse dynamic effect as the viewing angle changes.

06

SECURITY FIBERS

Technical Features

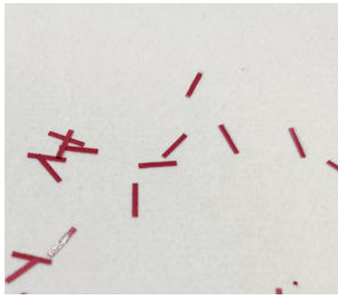
As a core anti-counterfeiting material for security certificates, it creates a barrier of hard-to-replicate, easy-to-identify and long-lasting anti-counterfeiting performance through physical embedding and multi-verification, preventing forgery technically and ensuring certificate authority and uniqueness.

-Hidden anti-counterfeiting, preventing high-end counterfeiting

-Embedded design, preventing malicious detachment

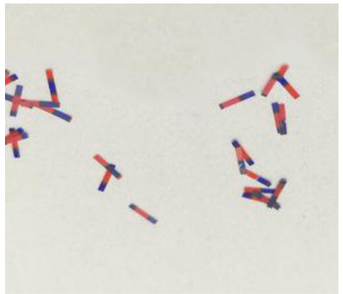
-Random distribution & exclusive features: no counterfeiting patterns

01 Commonly Used Visible Fibers (Visible to the Naked Eye)



Monochromatic Fiber

Multicolor Fiber



Segmented Fibe

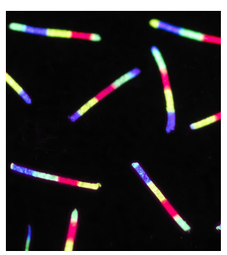
02 Fluorescent Fiber (Visible Under Fluorescent Lamp)

Monochromatic Fluorescent Fiber

Emits stable corresponding monochromatic fluorescence when irradiated by an ultraviolet lamp. Available basic fluorescent colors include four main color systems: red, yellow, blue and green.

Multicolor Fluorescent Fiber

Combines or blends monochromatic fluorescent fibers (in colors like red, yellow, blue, green, etc.). When irradiated by an ultraviolet lamp, it emits fluorescence in multiple corresponding colors.



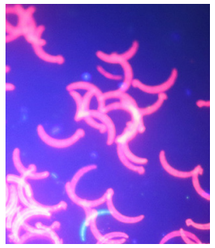
Spectral Fiber

A special fiber where a single fiber displays multiple colors in fixed-patterned segments. Its core feature is single-fiber multicolor with exclusive color combinations. Under UV lamp irradiation, a single fiber emits segmented fluorescence of different colors.

Broken-Point Fluorescent Fiber

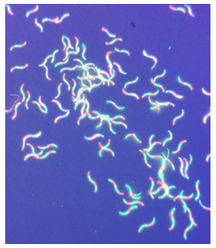
A fiber with discontinuous "broken-point" fluorescent areas formed via special processes. Under UV lamp irradiation, a single fiber exhibits a unique alternating effect of fluorescent and non-fluorescent segments.

03 Special-Shaped Fibers



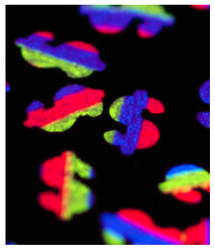
Crescent Fiber

Features a crescent special shape + fluorescent properties; requires customized spinning and fluorescent formulas, which are hard to replicate via ordinary counterfeiting methods.



S-Shaped Fiber

An S-shaped special fiber; under UV light, it shows the pink-green fluorescent effect as in the image.

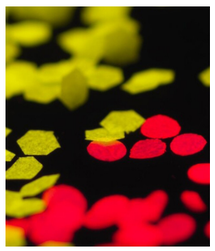


Dollar-Sign Fiber

A special-shaped fiber (cross-section in $ shape) made via special spinning; it's added with multi-color fluorescent materials, showing red, yellow, blue and other colorful luster under UV light.

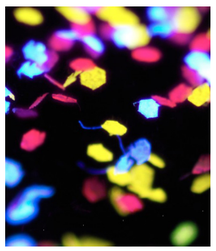
Pentagram Fiber

A special-shaped cross-section fiber made via special spinning; clear pentagram patterns can be seen under UV light.



Two-Color Special-Shaped Fiber

Combines hexagonal and circular structures with distinct production processes; the two colors correspond to different fluorescent formulas, making dual replication of shape and fluorescence nearly impossible for counterfeiters.



Multi-Color Multi-Shaped Fiber

Comes in shapes like hexagons and irregular fragments; under UV light, it shows fluorescent colors (red, yellow, blue, green, etc.), with different fluorescent formulas for different units.

07

SERIAL NUMBER

The security serial code is a unique ID code composed of numbers, letters, symbols, or combinations thereof. Generated by enterprises or anti-counterfeiting tech providers via specific algorithms, it is printed or encoded on certificates to distinguish genuine products from counterfeits and enable full-life-cycle product traceability and management.

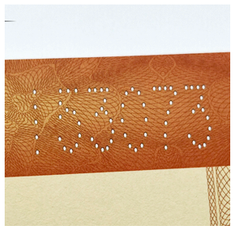
01 Visible Serial Numbers

Regular Serial Number

Also called "continuous number sequence": a unique, sequentially arranged combination of numbers/characters assigned to each certificate/product.

Hot-Stamped Serial Number

Made via hot-stamping (metal foil pressed onto the substrate under high temperature/pressure): a unique continuous number mark presented visually.



Hollow Out Serial Number

A sequence "cut out" on paper/substrates via die-cutting/laser engraving (not printing, but physical processing).

Aluminum-Washed Serial Number

On the surface of aluminum-plated film/paper: part of the aluminum layer is "washed off" via chemical/physical methods, revealing the substrate to form a serial number.

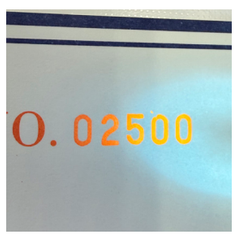
Universal Holographic Serial Code

Its core lies in combining universally mass-produced holographic anti-counterfeiting marks with unique corresponding serial codes for each mark, achieving the dual protection of "optical anti-counterfeiting + digital traceability".

02 Invisible (Fluorescent) Serial Numbers

Colorless Serial Number

Invisible under normal light; emits bright fluorescence and becomes visible when exposed to ultraviolet light.



Colored Serial Number

Shows one color under normal light; when irradiated with ultraviolet light, it emits bright fluorescence (and may even display another color).

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08

SECURITY BACKGROUND PATTERN

The security background pattern is a core visual anti-counterfeiting element of s ecurity certificates. Produced via professional anti-counterfeiting design software and special printing processes, it forms an intricate, hard-to-replicate pattern layer on the certificate substrate or designated areas. It enhances the certificate's aesthetics and authority, and achieves dual functions of rapid visual authentication and anti-replication through unique design logic and technical thresholds.

01 Classification of Security Background Pattern Effects

Rosette Pattern

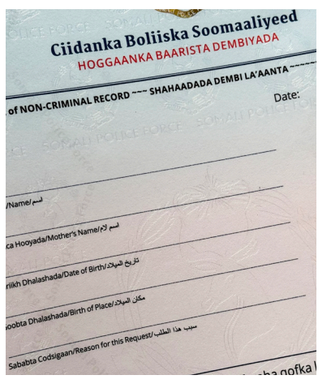
A closed security pattern, either circular or square, is formed by interweaving and rotating repeated lines based on symmetrical geometric or floral patterns, and serves as the iconic background pattern of security certificates.

Guilloché Pattern

Seamless cyclic structure of swirling, interwoven curves/broken lines (variable curvature, no start/end nodes). Rope-like twisted texture with complex line logic and strong anti-replication.

Embossed Pattern

A technique that simulates a 3D texture visual effect via flat printing processes. It uses color shading, ink overprinting and dot control to create a 3D-like background pattern on a flat substrate—with no physical raised/recessed texture on the finished product.



Rainbow Printing

This technique applies multi-color inks to a single printing unit, allowing different sections of a full solid graphic to show distinct hues with smooth, seamless transitions—just like the fading gradient of a rainbow

09

SECURITY THREAD

Technical Features

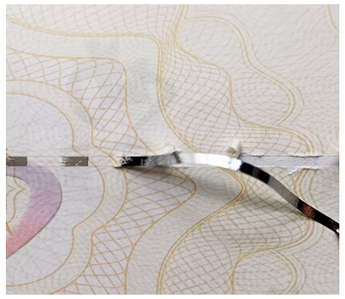
A technology that embeds (or semi-exposes) special metal threads, plastic threads, fluorescent threads, etc., into the paper interior during the paper production process. Its authenticity is identified through the thread's unique appearance, hidden information, or replication barriers.

-Physical anti-replication, fundamentally eliminating "cloned certificates".

-Exclusive hidden info, boosting traceability & uniqueness.

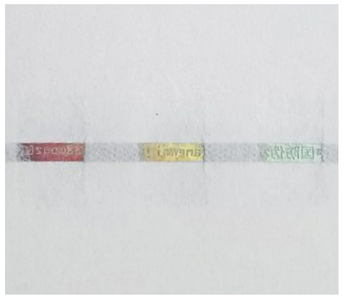
-Combined anti-counterfeiting synergy, raising forgery thresholds.

01 Security Thread Classification



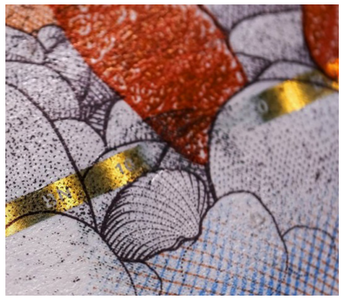
Solid-Color Security Thread

Colors are solid; common options include basic color systems like gold, silver, red, blue, and transparent.



Laser Security Thread

Integrated with laser holographic technology; the thread surface has holographic gratings. When rotated, it displays dynamic patterns, 3D effects, or color changes.

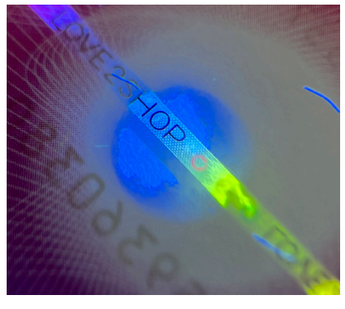


Magnetic Security Thread

No special appearance under normal light; magnetic information can only be read via magnetic detectors (e.g., the detector sounds an alarm).

Color-Shifting Security Thread

Uses color-shifting ink: rotation triggers obvious color/pattern changes (e.g., red to green, gold to silver). A high-end anti-counterfeiting thread identifiable by naked eye without tools.

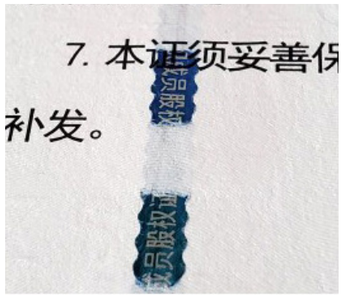


Fluorescent Security Thread

Embedded in paper/carriers; no obvious features under normal light. When irradiated with ultraviolet (UV) light, it emits fluorescence of a specific color.

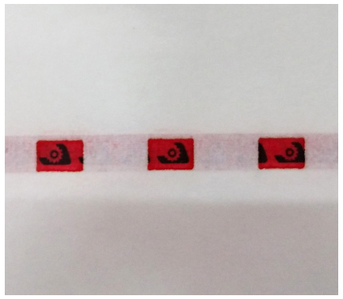
Microprint Security Thread

The thread surface bears high-precision microtext (invisible to naked eye), identifiable clearly only with a magnifying glass. Text content usually includes exclusive info like brand names or "Genuine Product".



Wave-Pattern Security Thread

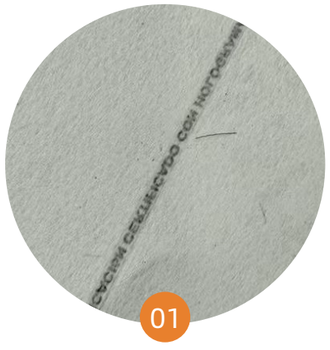
A security thread embedded in paper in a continuous wave shape (not a regular straight line). Wave amplitude and length are precisely customizable; it combines "shape anti-counterfeiting" and "process anti-counterfeiting".



Custom-Content Security Thread

According to enterprise/product needs, a personalized anti-counterfeiting thread with exclusive information (such as text, patterns, function combinations, etc.) customized on the security thread.

Security Thread Embedding Methods



Full-Embedded Security Thread

The entire security thread is embedded inside the paper fiber; no part is exposed. The complete thread embedding can only be observed through light transmission.

Windowed Security Thread

The security thread is partially embedded in paper and partially exposed. Exposed sections (called "windows") alternate with embedded ones, enabling direct naked-eye observation without light examination.

Special-Shaped Windowed Security Thread

Irregularly shaped windows (beyond traditional rectangles/bars): a high-end upgraded windowed security thread with custom window patterns for enhanced anti-counterfeiting and visual differentiation.

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HOT STAMPING FOIL

Technical Features

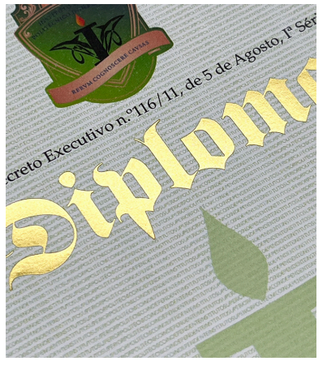
Transfers foil (coated with metal/special materials) onto certificate surfaces via heating and pressing, forming metallic luster (or special visual effect) patterns/text. A common physical + visual anti-counterfeiting method for security certificates.

-Prominent visual anti-counterfeiting features, easy to identify

-Stable physical properties, long-lasting durability

-High degree of customization, enabling exclusive anti-counterfeiting

01 Surface Luster Effects



Matte Effect

Matte hot-stamping foil: coated with matting agent or treated with frosting/microparticles, forming micro-rough metal layers with diffuse reflection, soft low-gloss finish, subtle sand texture and hidden anti-counterfeiting performance.

High-Gloss Effect

Glossy hot-stamping foil: un-matted surface coating, dense smooth metal particles, mirror reflection, high-shine metallic luster & strong visual impact.

02 烫印效果

Flat Hot-Stamping

The pattern after hot-stamping only shows flat metallic luster, with no raised or recessed tactile feel.

3D Hot-Stamping

The pattern formed by hot-stamping has obvious height and 3D layers, protruding from the certificate surface.

Laminated Seal

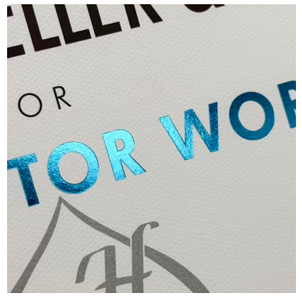
First, use hot-stamping to form the seal outline or core text, then perform lamination processing.

03 Hot-Stamping Foil Color Classification

Gold

Silver

Red



Blue

Green

Orange

Two-Color

Multi-Color

11

OTHER ANTI-COUNTERFEITING TECHNOLOGIES

Other anti-counterfeiting technologies have two categories: engineering and printing processes. Engineering anti-counterfeiting relies on certificate paper production or post-modification, serving as a "basic barrier" with permanent, wear-resistant effects. Printing anti-counterfeiting uses special inks/equipment/designs, combining with engineering anti-counterfeiting to form a "multiple barrier" for varied security needs.

01 Engineering Process Anti-Counterfeiting

Embossing Process

Custom molds press certificate paper to form ink-free 3D raised patterns/text. It fits "dignity, anti-counterfeiting, long-term preservation" needs, widely used for certificate covers/key areas.

Laser Drilling

High-precision lasers drill 0.1–0.5mm micro-holes on certificate paper to form specific patterns/text. Hidden feature of "invisible normally, visible against light" enables anti-counterfeiting for high-security certificates.

02 Printing Process Anti-Counterfeiting

Spot Color Printing

Prints identifiers (e.g., logos, borders, key text) on certificates with custom single-color inks instead of CMYK mixing. Spot color inks feature unique formulas, not accurately reproducible via standard four-color printing—boosting certificate color uniqueness.

Microtext

Micrometer-scale printed text (requiring a magnifying glass to read clearly), often hidden in certificate borders or pattern gaps. It demands extremely high printing precision, which ordinary counterfeiting equipment cannot achieve for such fine text.

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