

Security Printing Inks

offer for security printing companies

Security printing inks

for offset and screen printing





The specialists of the Document Security Laboratory of ANY Security Printing Company PLC have developed numerous complex, effective protection solutions. Our Company – as a result of its decades of experience – can assist its customers in document and product protection projects from conceptual planning to implementation. Furthermore, it can serve partners who need only partial solutions for their particular projects.

We offer a wide range of inks of our own development with UV, IR and unique additives including mono-, bi-, tri-, quadro- and penta-fluorescent inks emitting different colours and we provide anti-Stokes inks as well.



RECENTLY DEVELOPED INKS

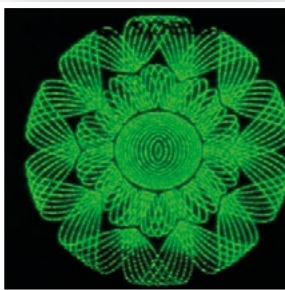
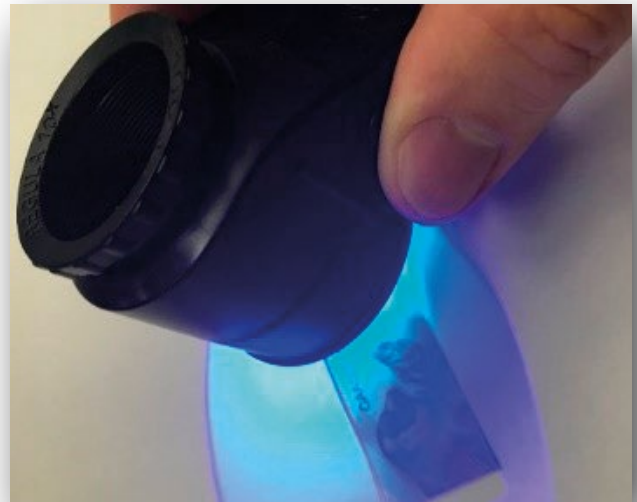
Multi-fluorescent ink

Multi-fluorescent inks are a new and unique grade of security inks. This grade (or family) of inks exploits the possibilities that lie in the versatile application of HEV (High Energy Visible) materials. These materials can be excited with blue light and they typically emit yellowish light. To detect this fluorescence, one needs not only a blue light source but a yellow optical filter too. We provide a small, handheld device with built-in light source and filter for checking this feature.

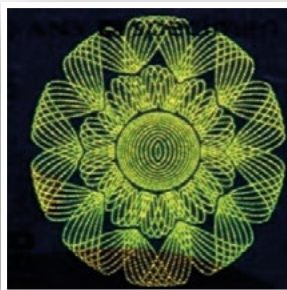
Combined with our HEV material we provide numerous different combinations, like

- Fluorescence in almost any colours at different wavelengths (365, 313, 254 nm)
- Bi- and tri-fluorescent combinations
- Up-converting (anti-Stokes) feature

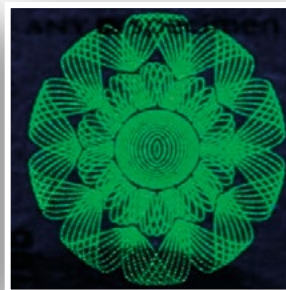
The number of possible variations is huge; we are ready to supply our partners with exclusive combinations.



Anti-stokes



UV 313 nm



UV 365 nm



HEV (Highly Energy Visible)



Penta-fluorescent ink

Blue/pink/greenish yellow fluorescence in long/medium/short wave UV respectively, plus anti-Stokes and infrared fluorescence: these are the five fluorescent features that are available in one offset ink. The print made with this ink may give unique protection for documents of high security.

Encrypted ink

Our new grade of inks is called "Encrypted inks". This grade of security inks is based on time-resolved fluorescence. For most people fluorescence is an immediate process, some material emits light as long as they are excited with UV light e.g. once the lamp is switched off the fluorescence is gone. But analysing the process in the micro-secondum scale a totally new picture develops. Different materials may behave differently as a function of time.

"Encrypted" inks may show different visible colours and/or different fluorescence. The number of combinations is infinite, thus we are able to offer our partners exclusive inks. Our new set of inks exploits this specific behaviour of different materials. Of course, for the detection of this feature a device is needed that has been specifically developed for this purpose. We offer this handy device for our partners.



OUR STANDARD RANGE OF INKS

Luminescent inks at long wavelength (365 nm)

This is one of the most widely used protective elements, which is easy to verify and provides a high level of protection against photocopying.



Luminescent inks at short wavelength (254 nm)

These security elements provide a higher level of protection, as UV lamps using short wavelengths are less common.

Bi-fluorescent inks (365/254 nm)

Bi-fluorescent security inks emit fluorescence of different colours when exposed to UV light of different wavelengths. These inks are easy to verify and difficult to reproduce.

Tri- and quadro fluorescent inks

Our unique tri-fluorescent UV security ink provides the same security advantages as our bi-fluorescent inks, but on a higher level. This UV security ink of ours displays blue/violet/green luminescence under 365/313/254 nm illumination. The quadro-fluorescent security ink is an even more sophisticated one. It shows an additional anti-Stokes luminescence compared to our tri-fluorescent ink.

Anti-Stokes inks

These inks are to be activated with IR irradiation and are able to emit not only green but orange and blue light as well. They are ideal to place hidden information and also lend themselves to use with mechanical verification systems.



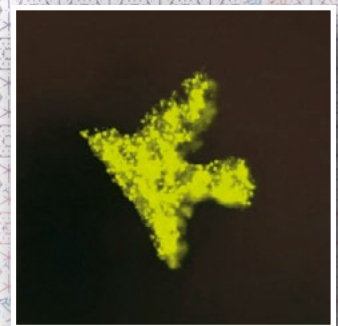
UVA



UVB



UVC



Anti-Stokes



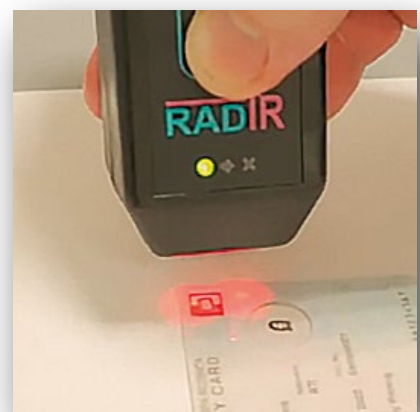
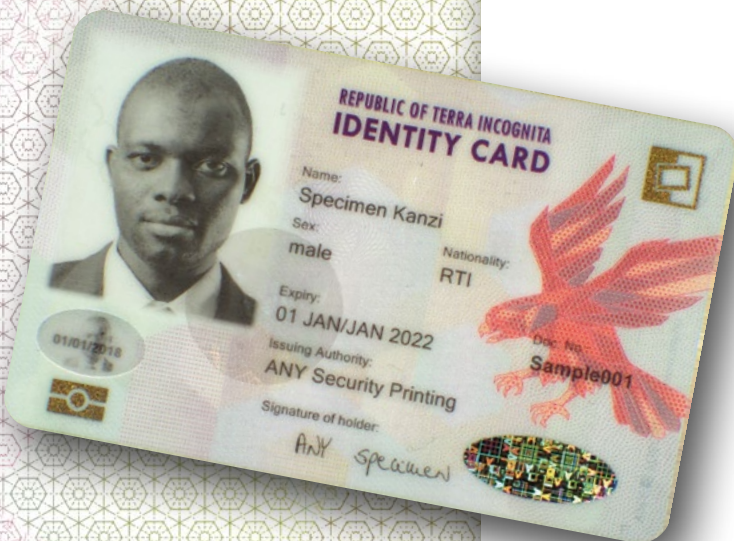
Green fluo black ink

This special black ink shows intensive green fluorescence under the influence of ultraviolet activation of any wavelength. This security ink is absolutely suitable for serial numbering or individual visualisation of logos.

IR/IR fluorescent ink (IF 15)

Prints with this ink emit infrared radiation when irradiated in the near infrared (IR) range. The prints are not visible to the naked eye or with regular verification equipment. IF 15 ink can be detected with a special verification device developed for this purpose. Our device called 'RADIR' reacts with flashlight and sound to the presence of such inks.

Parts of our products' portfolio can be seen in the following tables. To meet individual demands, we undertake the development of further inks with special features for paper-based documents and plastic cards, data pages as well.



UV LUMINESCENT INKS

| code | excitation 365 nm | excitation 313 nm | excitation 254 nm |
|----------------|-------------------|-------------------|-------------------|
| | emission colour | | |
| MF 01 | yellow | yellow | yellow |
| MF 05 | orange | orange | orange |
| MF 06 | yellow | yellow | yellow |
| MF 08 | orange | orange | orange |
| MF 10 | green | green | green |
| MF 12 | green | green | green |
| MF 13 | greenish blue | greenish blue | greenish blue |
| MF 14 | intense green | intense green | intense green |
| MF 15 | green | green | green |
| MF 24 | blue | blue | blue |
| MF 28 | blue | blue | blue |
| MF 36 | red | red | red |
| MF 40 | blue | blue | blue |
| MF 50 | - | - | greenish blue |
| MF 60 | - | red | red |
| MF 71 | - | - | green |
| MF 72 | - | green | green |
| Green Twin 365 | green | green | green |
| Green Twin 254 | - | green | green |
| Red Twin 365 | red | red | red |
| Red Twin 254 | - | red | red |
| BF 01 | yellow | orange | orange |
| BF 12 | blue | pink | pink |
| BF 13 | greenish blue | reddish | reddish |
| BF 16 | blue | red | red |
| BF 18 | blue | pink | pink |
| BF 19 | greenish blue | orange | orange |
| BF 20 | green | orange | orange |
| BF 22 | green | yellow | yellow |
| BF 30 | red | red | greenish |
| BF 32 | red | yellowish | yellowish |
| TF 03 | blue | pink | green |

QUADRO-FLUORESCENT INK

| code | excitation 365 nm | excitation 313 nm | excitation 254 nm | 980 nm led/laser |
|-------|-------------------|-------------------|-------------------|------------------|
| QF 02 | blue | pink | green | green |

ANTI-STOKES (UP-CONVERTING) INKS

| code | excitation | emission colour |
|-------|------------------|-----------------|
| UF 02 | 980 nm led/laser | green |

MISCELLANEOUS

| code | excitation | emission colour | special feature |
|------------------|------------|-----------------|----------------------|
| Green Fluo Black | UV 365 nm | green | black visible colour |

Special security features

the use of inks in practice

Buried image



This is a security element printed inside of the data page, acting like a watermark. By turning the data page against a powerful light source an image of a bird sitting on a brunch becomes visible.



Shadow image

This watermark-like feature gives extra security to the document. In infrared radiation (850-950 nm) the image of the bird only (without the brunch) shows up as a faint shadow image. The MRZ area remains completely free of IR absorbing elements as per the ICAO 9303 recommendations.



MA (mark advanced)

Invisible colourful fluorescent image. This is a unique printed feature that is completely invisible under normal light but becomes visible under UV 365 light.



LENA

The print is invisible both under normal and under UV light. But its presence can be very easily checked by placing the window onto a simple copy paper and illuminating it with a simple UV lamp. This provides the simplicity of check like a usual second level device. Meanwhile, it is deeper hidden than a usual fluorescent print for example.

ANY Security Printing Company PLC

About the Company

ANY Security Printing Company PLC is currently the biggest security printing company and identity solution provider in Hungary, and is present in more than 60 countries. With more than 1000 employees in 4 countries and 9 premises, its goal is to serve its partners to the highest standards through continuous innovation and development. The Company's shares have been listed on the Budapest Stock Exchange in the premium category since 2005.

The Company helps state administration in secure person and innovative product identification projects from designing the concept to implementation. Its international qualifications and certificates assure the highest security in the field of document and card production, personalisation. Besides manufacturing high security products, ANY Security Printing Company PLC – as a system integrator – offers complex solutions and know-how transfer for the preparation, execution and operation of a document reform including the establishment of a security printing house.

The specialists of the Document Security Laboratory of ANY have developed numerous complex, effective protective solutions, including document printers, security inks, paper additives and special control devices. These products can be offered as a supplement to the project further maximizing the security features of the goods to be manufactured in a possible future plant. Our Company – as a result of its decades of experience – can assist its customers in document and product protection projects from conceptual planning to implementation. Furthermore, it can serve partners who need only partial solutions for their particular projects. In this manner, ANY is a synergistic partner of paper-mills, security printing houses, state administration and private companies.

Its own Document Security Laboratory, references, special technology, security preparedness and more than 170 years of experience guarantee that it can offer the best possible products for its Customers. ANY believes in taking a comprehensive approach to security. That is why they strive to provide secure, durable and innovative solutions.

References

- Hungarian electronic identity card
- Sri Lanka ID card, driving licence
- Hungarian ePassport
- Vanuatu passport
- Driving licences in more than 4 countries
- European and Ghanaian health insurance card
- Schengen (for 3 countries) and Guinean, Cameroonian, Angolan visa stickers, Ivory Coast diplomatic visa
- Hungarian, Ivorian and Yemeni excise, tax and revenue stamps
- EU residence permit
- Election forms in 3 countries
- Vouchers for Sodexo Group
- Norwegian and Burundi vehicle registration certificate
- Georgian sea services book, seafarer's documents

Domestic and international certificates

- certified bidder and securities producer of Hungary
- authorized supplier to NATO (up to NATO "Secret" level)
- Industrial Security Clearance up to NATO and EU "Secret" level, system licence for classified data management
- Industrial Security Clearance up to national "Strictly confidential" level, system licence for classified data management
- ISO 9001 quality management system certificate
- ISO 14001 environmental management system certificate
- ISO 27001 information security certificate
- ISO 14298 certificate (Central Bank level, Governmental level)
- ISO 45001 occupational health and safety management system
- AQAP 2110 certificate
- MasterCard Card Quality Management certificate

Value-added services

- decades of experience in document production and issuing
- special inks and additives, printers and control devices developed by ANY
- full lifecycle management of issued documents
- know-how delivery



Our products are manufactured using cutting-edge technology coupled with our staff's innovative professional knowledge. Our references, special technology and security preparedness guarantee that we can offer the best possible product for our customers. Please do not hesitate to contact our colleagues if you have questions.

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