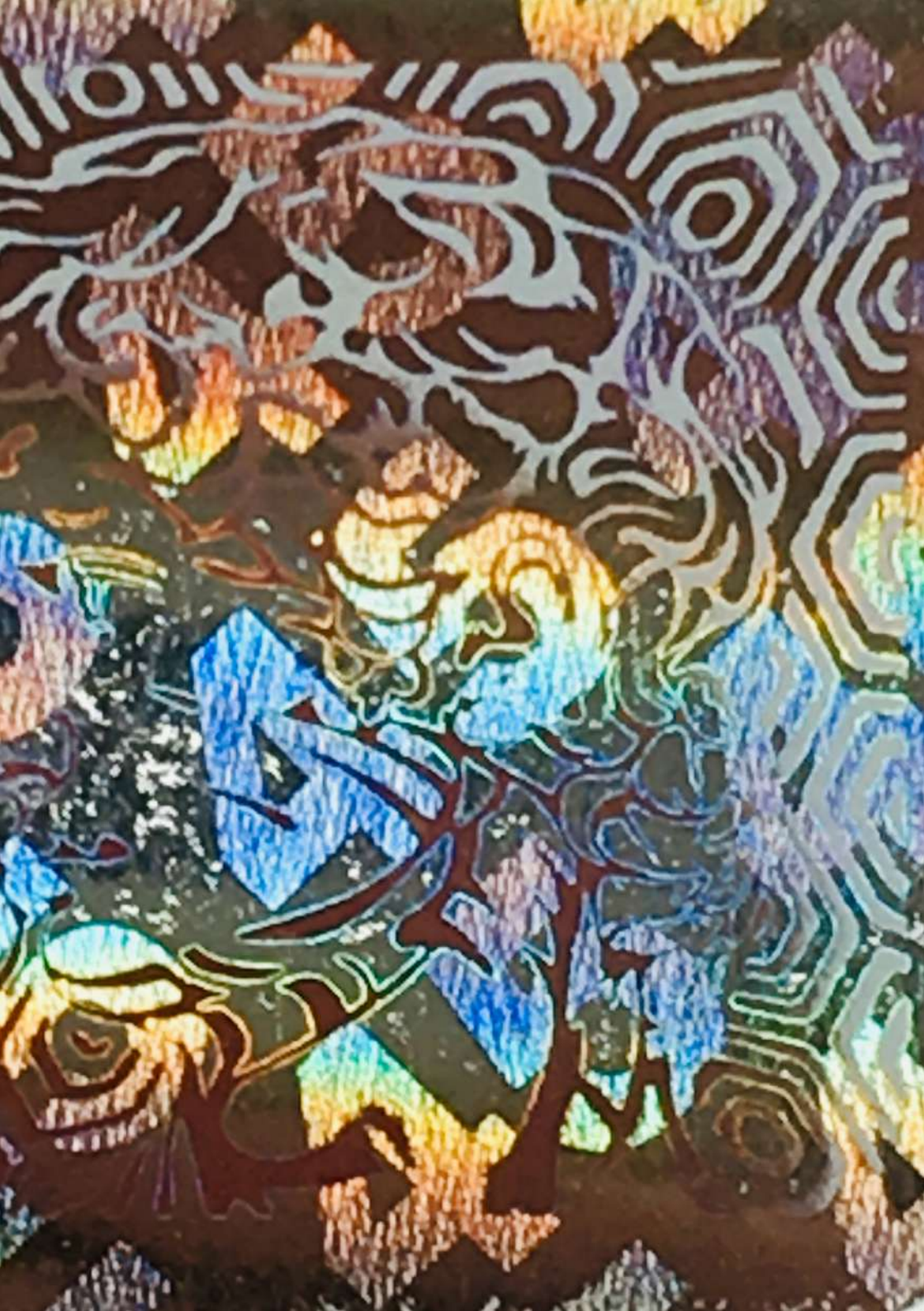
EPTAINKS

the partner for **industrial printing**

MANOUKIAN Argon

SECURITY INDUSTRY



SECURITY INDUSTRY

EPTAINKS develops, manufactures and supplies security inks for different technological applications such as: banknotes, brand protection, ID documents, smart cards and ticketing. Thanks to our experience we ensure products integrity and authenticity against any fraud or counterfeiting attempt.

A group of specialists supports and advises our clients in selecting the safest and most efficient solution to protect their business. Our wide range of application technology is able to identify and authenticate any object or sensitive information, protecting their brand and ensuring its value.

All our security inks are developed to withstand frequent physical and chemical stresses and follow the most stringent rules for health and environment protection.

The complexity of our technological solutions is related to the required specific function, the target market and the tools necessary for authentication.

EPTAINKS offers a full range of specialty inks suitable for different printing processes, from the most common ones available on the market, to the most exclusive and expensive ones.

Moreover, EPTAINKS know-how in the formulations of inks for different industries allows to provide solutions for assorted types of substrates: fabric, paper, plastic, etc.

Within the security products portfolio, EPTAINKS offers inks both with overt features, such as the optical variable and scratch-off ones, and with covert features characterized by different levels of security.

Overt **Security Inks**

Overt authentication technologies contain features visible to the naked eye or tactile with outstanding physical performance or that are difficult to reproduce.

Optical Variable Inks

Optically variable inks or "interferencial inks", are capable of changing colour depending on the observation point or the angle of incidence of the light. A wide range of colours is available.

Thermochromic inks

Thermochromics are reversible thermo-sensitive inks: when the transition temperature is reached, the ink shifts from colourful to colourless. The temperature range for the colour variation depends on the pigment, and goes from -15° C to 65° C, with a sensitivity of ± 3° C. The inks are available in different colours.

S-CARD inks

This series is dedicated to the inks suitable for the decoration of plastic cards made with different materials (polycarbonate and polyvinylchloride). These inks have excellent lamination properties and are available in different colours and metallic effects.

Pearlescent inks

Pearlescent inks have a particular brightness when exposed to sunlight, giving a "pearl effect" to the surface upon which they are applied. They are available in several colours.

Phosphorescent inks

Phosphorescent inks glow in the dark after having been exposed to daylight for a variable period of time: in other words, they are able to absorb the solar radiation and emit light even when it is dark. The level of intensity and effect duration of these inks depend on the time of exposure to the solar light and the quantity of ink applied.

Scratch-off inks

Scratch-off inks can be removed easily if rubbed with a rigid material, such as a coin. They are very opaque inks, being able to completely hide the underlying information until their removal. They are available in three colours: gold, silver and black.

Covert **Security Inks**

Covert authentication technologies contain hidden features that are visible only by using suitable tools. They can be basic and available on the market, such as UV sources and laser pens (Level 2) or laboratory settings based on microscopes or other specialized equipment (Level 3 and more).

UV Fluorescent inks

UV fluorescent inks are invisible to the human eye in natural environmental light conditions, but become visible when exposed to an ultraviolet radiation (from UV-A to UV-C). They are available in various colours: red, yellow, white, green and blue; each one can be provided with different shades.

IR Upconverting inks

IR upconverting inks are not visible in natural light conditions, but show upconvertion fluorescence in the visible range when exposed to an infrared radiation of a certain wavelength. The change is reversible; actually when the radiation is removed the ink returns invisible. They are available in various colours.

IR Absorbing inks

IR absorbing inks can be transparent or coloured in the visible range, but they have the property of selectively absorbing in a specific region of the IR spectrum.

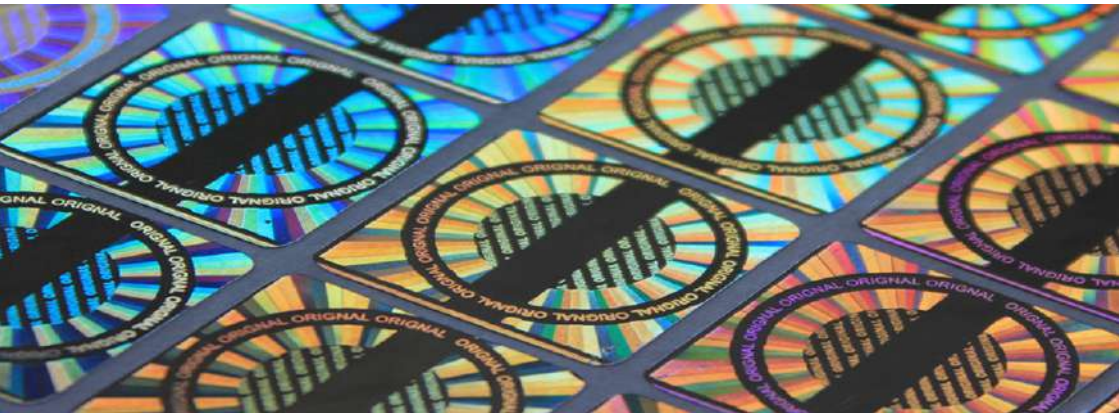
Magnetic inks

Magnetic inks can incorporate and store encoded information, readable with specific MICR (Magnetic Ink Character Recognition) detectors. Depending on their magnetic properties, they can be classified as:

- High-Co (high-coercive)
- Low-Co (low-coercive)

IR Transparent inks

IR transparent inks show black colour shades in the visible range, but they become transparent in specific regions of the IR spectrum.



Market **Applications**

INKS	Banknotes	ID Documents	Brand Protection	Smart Cards	Ticketing
OPTICAL VARIABLE					
PEARLESCENT					
THERMOCHROMIC					
PHOSPHORESCENT					
S-CARD					
SCRATCH-OFF					
UV FLUORESCENT					
UV FLUORESCENT ERASABLE					
IR UPCONVERTING					
MAGNETIC					
IR ABSORBING					
IR TRANSPARENT					

Printing **Processes**

INKS	Screen printing	Pad printing	Rotogravure	Off-set	Dyeing
OPTICAL VARIABLE	✓	✓	✓		
PEARLESCENT	✓	✓	✓		
THERMOCHROMIC	✓	✓	✓	✓	
PHOSPHORESCENT	✓	✓		✓	
S-CARD	✓	✓			
SCRATCH-OFF	✓				
UV FLUORESCENT	✓	✓	✓	✓	✓
UV FLUORESCENT ERASABLE				✓	
IR UPCONVERTING	✓	✓			✓
MAGNETIC			✓		
IR ABSORBING	✓		✓		✓
IR TRANSPARENT	✓			✓	

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EPTAINKS designs, develops, manufactures and supplies valuable inks by means of different technological applications, such as screen printing, pad printing, sublimation printing, offset printing, transfer printing and rotogravure.

With our premium brands – MANOUKIAN ARGON, KFG and VISPROX – we have settled relevant milestones in the printing industry history.

Our product portfolio is worldwide recognized for its superior quality and durable performances, including a wide range of formulation technologies: Water-based, Plastisol, Silicone, Plastisol PVC free, UV, Solvent based, Sublimation and Photosensitive inks.

The value propositions cover the needs of demanding industries such as Fashion, Signage, Packaging, Habitat, Security, Mobility, Leisure and High Tech.

The focus on reference industries is constantly leading us towards an expansion of our business in the international markets: our network now includes local organizations in Italy, France, India, Bangladesh, China, Spain, Finland, Brasil, Russia and United States.

The ability to listen to our Clients and to drive innovation through their industrial processes has been rewarded in over 100 countries, with long term and win-to-win partnerships.

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