Anti-counterfeiting and anti-piracy technology guide

https://euipo.europa.eu/anti-counterfeiting-and-anti-piracy-technology-guide

IR-Sensitive Inks (Infrared)

IR-sensitive inks are completely invisible to the naked eye and must be detected with a specific infrared reader. They are applicable to all types of material and are used in anti-counterfeiting to prevent unauthorised photocopying. One of the more common applications of IR-sensitive inks is to hide barcodes or stop them from being reproduced.

Used for

- Authentication
- Anti-tampering / Anti-alteration

Suitable for

- Very small products
- Small products
- Medium-sized products
- Large products

Goes on

- Product
- Packaging

Can be used for

- Physical products

Visibility

- Invisible

Reading device needed

- Yes

Connection to server

- No

Description

IR-sensitive inks can be both transparent and opaque. Among the most commonly used ink types in this category are the so called ‘meta-material’ inks, which are pairs of different colours that appear to be the same in daylight but become mismatched when observed under infrared light.

Uses

While IR inks are applicable to all media, they are most typically printed on banknotes, paper valuables and documents to guarantee authenticity. They are generally more robust and longer lasting than UV-sensitive inks, which can lose effectiveness with age.

Implementation

If you want to print IR-sensitive ink directly onto the surface of your product(s), you will need to ensure that you have the appropriate processes in place to do this during production. The printing process will need to be adapted to ensure that the ink is applied in the desired position.

Cost

The costs associated with IR-sensitive inks vary significantly according to the type used and the product they are applied to. It is therefore difficult to give a general idea of the investment required.

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