Anti-counterfeiting and anti-piracy technology guide

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UV-Sensitive Inks

This technology uses photosensitive ink that is visible to the naked eye but changes colour or disappears when exposed to ultraviolet light (UV light). This is thanks to its fluorescent pigments, which show up one shade in daylight and another under UV light. The ink can only be detected using specific devices, such as a 'Wood's lamp' – a light source that emits electromagnetic radiation mainly in the ultraviolet range but also, to a negligible extent, in the visible light range.

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

- Visible
- Invisible

Reading device needed

- Yes

Connection to server

- No

Description

Fluorescent pigments are photochromic and luminescent inks which have been used since the 1960s to manufacture the paper for paper valuables and stamps. They react to different light wavelengths and become active when exposed to UV radiation.

Some companies offer colour-coded microcapsules (containing UV-sensitive ink), which are applied to the surface of a product or inserted directly into it. These microcapsules can only be read by an electron microscope.

Some types of UV-sensitive inks, such as photochromic and 'white' multispectral inks, are very difficult to find. Their markings are therefore very difficult to reproduce and, as such, provide heightened protection against counterfeiting.

Uses

UV-sensitive inks are ideal for securing official documents, paper valuables, postage stamps and plastic packaging, but they can be applied to all types of materials.

Implementation

If you want to print UV-sensitive ink directly onto the surface of your product(s), you will need to put 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 UV-sensitive inks vary according to the type of ink used but, in general, photochromic and ‘white’ multispectral inks are more expensive than the other, more common types of inks.

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