Anti-counterfeiting and anti-piracy technology guide

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

Security Threads

Security threads are threads of various materials (metal, fabric, polymers) that are woven into or otherwise attached to products to enable authentication and prevent tampering. The diversity of the thread materials means that this technology can be embedded into a range of products. Additional security features – such as special coatings or microprinting – may be applied to the thread for more advanced protection against counterfeiting.



Used for

- Authentication
- Anti-tampering / Anti-alteration

Suitable for

- Small products
- Medium-sized products
- Large products

Goes on

- Product
- Packaging

Can be used for

- Physical products

Visibility

- Visible

Reading device needed

- No

Connection to server

- No

Description

The different types of security thread can be grouped according to material and function:

- metal threads – these are embedded directly into the product to prevent it from being reproduced, e.g. banknotes;
- miscellaneous threads (polypropylene, fabric, etc.) for attaching and/or sealing – these are used, for example, to attach tags to clothes or products and as micro-seals for warranty purposes;
- polymeric threads – these are threads of varying thicknesses that may be:
  - metal-coated (fully or partly);
  - painted with special light-sensitive pigments;
  - microprinted with digits and text;
  - magnetised to include hidden information detectable only by magnetic readers.

Uses

Security threads can be used to secure products in diverse sectors. However, they are most commonly embedded in banknotes.

Implementation

If you want to embed metal threads into your products, then you will need to incorporate an embedding step into the production process. If, however, you want to use the other types of security thread – those that attach tags or contain printed information – then you will not need to make any changes to the production process; these types of thread are normally applied to the finished product or the packaging.

Cost

The diversity of materials and modes of application for security threads makes it difficult to give a general idea here of the costs associated with their implementation.

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