

Title (en)  
FORGERY-PROOF SECURITY FEATURES IN SECURITY OR VALUE DOCUMENTS

Title (de)  
FÄLSCHUNGSSICHERE SICHERHEITSMERKMALE IN SICHERHEITS- ODER WERTDOKUMENTEN

Title (fr)  
SIGNES DE SÉCURITÉ RÉSISTANTS À LA FALSIFICATION DANS DES DOCUMENTS DE SÉCURITÉ OU DE VALEUR

Publication  
**EP 2331326 A1 20110615 (DE)**

Application  
**EP 09778442 A 20090910**

Priority  
• EP 2009006559 W 20090910  
• EP 08016743 A 20080924  
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Abstract (en)  
[origin: EP2172336A1] The layer structure comprises a first layer and a second layer made of thermoplastic and filler material, where the first and second layers are filled layers (1, 2) and are made of a first plastic film and a second plastic film respectively. The first and second plastic films are made of thermoplastic and filler material and are filled films. A water mark (S) is introduced on one of the both filled films that are used during production by a laser print and is contained between the both filled layers. The layer structure has a further thermoplastic layer (3) between the both filled layers. The layer structure comprises a first layer and a second layer made of thermoplastic and filler material, where the first and second layers are filled layers (1, 2) and are made of a first plastic film and a second plastic film respectively. The first and second plastic films are made of thermoplastic and filler material and are filled films. A water mark (S) is introduced on one of the both filled films that are used during the production by a laser print and is contained between the both filled layers. The layer structure has a further thermoplastic layer (3) between the both filled layers. The further thermoplastic layer is made of a transparent plastic film that is made of thermoplastic. The water mark is introduced on the transparent plastic film by the laser print. The plastic film for the further thermoplastic layer comprises three layers. An inner layer is made of thermoplastic with a Vicat softening point B/50 ( i n n e r ). A lower- and an upper layer are made of thermoplastic with a Vicat softening point B/50 ( o u t e r ), which is less than the Vicat softening point B/50 ( i n n e r ). The plastic film having security features introduced by the laser print has a specific surface resistivity of  $10^8 > 10^1 > 2 > \omega$ , and contains an additive. The water mark introduced by the laser print is an individual imprint (A). The filler material in the filled layers is a color pigment or titanium oxide, zirconium oxide, barium sulfate or glass fibers for producing a translucency of the filler layers. Another thermoplastic layer is introduced on one of the both filled layers, is transparent, and has partial color laser imprint, which is identical to the form after completely or partially with the water mark introduced by the laser print. An independent claim is included for a method for producing personalized security or value documents.

IPC 8 full level  
**B32B 7/027** (2019.01); **B32B 27/28** (2006.01); **B42D 15/00** (2006.01)

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