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(54) **Thermal transfer printing on plastics materials**

(57) A printed marking on a plastics substrate has a first, sub-surface portion of a first pigmentation material bound to, or penetrated into the substrate, and a second, surface portion of a second pigmentation material adhered to the surface of the substrate overlaying the

sub-surface portion of the mark. The dual nature of the marking provides advantages in terms of durability, particularly for use in harsh environments, or situations where the mark is liable to be subject to chemical action, or abrasion in the normal course of events or in cases of unauthorised tampering.

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# EUROPEAN SEARCH REPORT

Application Number  
EP 99 30 2731

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Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
X	US 5 620 508 A (T.YAMANO ET AL.) 15 April 1997 (1997-04-15) * column 1, line 56 - column 2, line 14 * * column 3, line 41 - column 4, line 13 * * column 4, line 33 - line 38 * * claims 1-5; tables 1,2 * ---	1-11	B41M5/38 B41M3/14
X	US 4 784 905 A (A.SUZUKI ET AL.) 15 November 1988 (1988-11-15) * claims 1-5,14,20,24; examples 4-4 * * column 2, line 44 - column 3, line 17 * * column 4, line 40 * ---	1-11	
X	C.A.BRUCE ET AL.: "Thermally Sensitive Ribbon for Laser Transfer Printing" IBM TECHNICAL DISCLOSURE BULLETIN., vol. 18, no. 10, March 1976 (1976-03), page 3416 XP002085934 IBM CORP. NEW YORK., US ISSN: 0018-8689 * the whole document * ---	1,2,5-11	
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X	EP 0 365 222 A (EASTMAN KODAK COMPANY) 25 April 1990 (1990-04-25) * page 2, line 49 - line 55 * * page 3, line 25 - line 30 * * claim 1; examples 1,2 * ---	1-3,5-11	
The present search report has been drawn up for all claims			
Place of search <b>THE HAGUE</b>		Date of completion of the search <b>6 June 2000</b>	Examiner <b>Bacon, A</b>
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... &amp; : member of the same patent family, corresponding document</p>			

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Application Number  
EP 99 30 2731

DOCUMENTS CONSIDERED TO BE RELEVANT			
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X	US 4 661 393 A (K.UCHIYAMA ET AL.) 28 April 1987 (1987-04-28) * claims 1-4; examples 1,4 * * column 1, line 63 - column 2, line 56 * * column 4, line 19 - line 38; figure 1 * ---	1,2,5-11	
P,X	WO 99 11466 A (IMATION CORPORATION) 11 March 1999 (1999-03-11) * page 2, line 29 - page 3, line 24 * * page 4, line 12 - line 26 * * claims 1,10-12,21; examples 1-4 * -----	1-11	
The present search report has been drawn up for all claims			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
Place of search THE HAGUE		Date of completion of the search 6 June 2000	Examiner Bacon, A
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ..... &amp; : member of the same patent family, corresponding document</p>			

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on  
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