



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) **EP 1 375 177 A3**

(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
20.07.2005 Bulletin 2005/29

(51) Int Cl.7: **B41M 5/00**

(43) Date of publication A2:
02.01.2004 Bulletin 2004/01

(21) Application number: **03076859.2**

(22) Date of filing: **16.06.2003**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IT LI LU MC NL PT RO SE SI SK TR**
Designated Extension States:
AL LT LV MK

- **Bermel, Alexandra D., Eastman Kodak Company
Rochester, New York 14650-2201 (US)**
- **Bringley, Joseph F., Eastman Kodak Company
Rochester, New York 14650-2201 (US)**
- **Landry-Coltrain, Christine,
Eastman Kodak Company
Rochester, New York 14650-2201 (US)**

(30) Priority: **26.06.2002 US 180395
26.06.2002 US 180179**

(74) Representative: **Haile, Helen Cynthia et al
Kodak Limited
Patent Department, W92-3A,
Headstone Drive
Harrow, Middlesex HA1 4TY (GB)**

(71) Applicant: **EASTMAN KODAK COMPANY
Rochester, New York 14650 (US)**

(72) Inventors:
• **Sharma, Krishamohan,
Eastman Kodak Company
Rochester, New York 14650-2201 (US)**

(54) **Ink jet recording element and printing method**

(57) An ink jet recording element comprising a support having thereon an image-receiving layer, the ink jet recording element containing core/shell particles wherein the shell of the particles consists a metal(oxy) hydroxide complex, $M^{n+}(O)_a(OH)_b(AP^-)_c \cdot xH_2O$, wherein M is at least one metal ion; n is 3 or 4; A is an organic or inorganic ion; p is 1, 2 or 3; and x is equal to or greater than 0; with the proviso that when n is 3, then a, b and

c each comprise a rational number as follows: $0 \leq a < 1.5$; $0 < b < 3$; and $0 \leq pc < 3$, so that the charge of the M^{3+} metal ion is balanced; and when n is 4, then a, b and c each comprise a rational number as follows: $0 \leq a < 2$; $0 < b < 4$; and $0 \leq pc < 4$, so that the charge of the M^{4+} metal ion is balanced.

EP 1 375 177 A3



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 03 07 6859

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
Y	PATENT ABSTRACTS OF JAPAN vol. 016, no. 153 (M-1235), 15 April 1992 (1992-04-15) & JP 04 007189 A (KANZAKI PAPER MFG CO LTD), 10 January 1992 (1992-01-10) * abstract * * the whole document *	1-10	B41M5/00
Y	PATENT ABSTRACTS OF JAPAN vol. 017, no. 577 (C-1122), 20 October 1993 (1993-10-20) & JP 05 170425 A (JAPAN SYNTHETIC RUBBER CO LTD), 9 July 1993 (1993-07-09) * abstract * * the whole document *	1-10	
Y	EP 0 391 308 A (CANON KABUSHIKI KAISHA) 10 October 1990 (1990-10-10) * page 3, line 20 - line 39 * * page 4, line 17 - line 18 * * page 4, line 51 - line 53 * * page 5, line 8 - line 11 * * page 8, line 14 - line 20 *	1-10	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			B41M
Y	EP 0 963 947 A (OJI-YUKA SYNTHETIC PAPER CO., LTD) 15 December 1999 (1999-12-15) * the whole document *	1-10	
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 30 May 2005	Examiner Whe lan, N
CATEGORY OF CITED DOCUMENTS 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		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 & : member of the same patent family, corresponding document	

1

EPO FORM 1503 03/82 (P04/C01)

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

EP 03 07 6859

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
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

30-05-2005

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
JP 04007189	A	10-01-1992	JP 2944143 B2	30-08-1999
JP 05170425	A	09-07-1993	JP 3273375 B2	08-04-2002
EP 0391308	A	10-10-1990	JP 2263683 A	26-10-1990
			JP 2670454 B2	29-10-1997
			AT 103244 T	15-04-1994
			CA 2013767 A1	03-10-1990
			DE 69007520 D1	28-04-1994
			DE 69007520 T2	14-07-1994
			EP 0391308 A1	10-10-1990
			US 5182175 A	26-01-1993
			US 5907342 A	25-05-1999
EP 0963947	A	15-12-1999	JP 10152315 A	09-06-1998
			JP 10167706 A	23-06-1998
			EP 0963947 A1	15-12-1999
			WO 9822388 A1	28-05-1998
			TW 457217 B	01-10-2001