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(54) **Positive-working thermal imaging element and positive-working lithographic printing plate precursor**

(57) A positive-working thermal imaging element, which can be imaged by thermal energy is made up of a hydrophilic substrate, and a composite layer structure composed of two layer coatings. The first layer of the composite is composed of an aqueous developable polymer mixture containing a photothermal conversion material which is contiguous to the hydrophilic substrate. The second layer of the composite is composed of one

or more non-aqueous soluble polymers which are soluble or dispersible in a solvent which does not dissolve the first layer. The second layer may also contain a photothermal conversion material. The element is exposed with an infrared laser or a thermal print head. Upon aqueous development of the imaged element unexposed portions are ink-receptive.

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EUROPEAN SEARCH REPORT

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EP 04 07 8163

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)
A	EP 0 678 380 A2 (PRESSTEK, INC) 25 October 1995 (1995-10-25) * page 6, line 9 - page 9, line 8 * -----	1,12,13	B41C1/10 B41M5/36
P,A	EP 0 864 420 A1 (AGFA-GEVAERT N.V) 16 September 1998 (1998-09-16) * page 3, line 32 - page 5, line 14 * * examples * -----	1,12,13	
P,X	EP 0 908 779 A1 (AGFA-GEVAERT N.V; AGFA-GEVAERT) 14 April 1999 (1999-04-14) * paragraph [0026] - paragraph [0050] * * examples * -----	1-9, 11-13	
E	EP 0 943 451 A1 (AGFA-GEVAERT N.V; AGFA-GEVAERT) 22 September 1999 (1999-09-22) * paragraph [0030] - paragraph [0054] * * examples * -----	1-3,5-9, 11-13	
			TECHNICAL FIELDS SEARCHED (Int.Cl.7)
			B41C
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 7 February 2005	Examiner Markham, R
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			

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

EP 04 07 8163

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The members are as contained in the European Patent Office EDP file on
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07-02-2005

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
EP 0678380	A2	25-10-1995	US 5493971 A	27-02-1996
			AT 182522 T	15-08-1999
			AU 689209 B2	26-03-1998
			AU 1623495 A	26-10-1995
			CA 2146415 A1	14-10-1995
			DE 69510985 D1	02-09-1999
			DE 69510985 T2	17-02-2000
			JP 2744893 B2	28-04-1998
			JP 8048018 A	20-02-1996
EP 0864420	A1	16-09-1998	DE 29824516 U1	26-04-2001
			DE 69800847 D1	05-07-2001
			DE 69800847 T2	20-09-2001
			EP 1110720 A2	27-06-2001
			JP 3583610 B2	04-11-2004
			JP 10250255 A	22-09-1998
			US 6040113 A	21-03-2000
EP 0908779	A1	14-04-1999	DE 69806112 D1	25-07-2002
			DE 69806112 T2	23-01-2003
			JP 11192782 A	21-07-1999
			US 6083663 A	04-07-2000
EP 0943451	A1	22-09-1999	DE 69901642 D1	11-07-2002
			DE 69901642 T2	30-01-2003
			JP 2000035662 A	02-02-2000
			US 6153353 A	28-11-2000

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82