

Europäisches Patentamt European Patent Office Office européen des brevets



(11) **EP 1 217 437 A3**

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3: 17.12.2003 Bulletin 2003/51

(51) Int CI.⁷: **G03C 8/52**, G03C 1/815, C08K 3/22, C08K 7/00

(43) Date of publication A2: **26.06.2002 Bulletin 2002/26**

(21) Application number: 01129247.1

(22) Date of filing: 11.12.2001

(84) Designated Contracting States:

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

Designated Extension States:

AL LT LV MK RO SI

(30) Priority: 11.12.2000 JP 2000376717

11.12.2000 JP 2000376719 11.12.2000 JP 2000376723 (71) Applicant: Fuji Photo Film Co., Ltd. Kanagawa-ken (JP)

(72) Inventor: Hayashi, Hiroshi
Minami-ashigara-shi, Kanagawa-ken (JP)

(74) Representative: HOFFMANN - EITLE
Patent- und Rechtsanwälte
Arabellastrasse 4
81925 München (DE)

(54) Titanium oxide-containing ultraviolet shielding filter agent, and color diffusion transfer photographic filter unit

(57) An ultraviolet shielding filter agent, which contains fine-particle titanium oxide, and which satisfies the following condition (A), (B) or (C):

(A) that the fine-particle titanium oxide has an average primary particle diameter or average primary short-axis particle diameter of 1 to 45 nm and is surface-treated with a specific amount of aluminum oxide and/or silicon dioxide, and that the ultraviolet shielding filter agent further comprises a polyhydric alcohol;

(B) that the fine-particle titanium oxide has an average primary particle diameter or average primary short-axis particle diameter from 1 to 45 nm, and has rutile crystallinity from 20 to 70%, and that the

ultraviolet shielding filter agent further comprises a polyhydric alcohol; or

(C) that the fine-particle titanium oxide has a primary particle shape of a cylindrical shape or a spindle shape, and that among average primary particle diameters of the fine-particle titanium oxide, a short-axis diameter is from 1 to 45 nm, a long-axis diameter is from 3 to 200 nm, and a ratio of the long-axis diameter to the short-axis diameter is from 2 to 10. A color diffusion transfer photographic film unit, which uses the ultraviolet shielding filter agent.



EUROPEAN SEARCH REPORT

Application Number EP 01 12 9247

Category		ndication, where appropriate,	1	elevant	CLASSIFICATION	
E	of relevant pass EP 1 193 550 A (FUJ 3 April 2002 (2002- * page 3, line 11 - * page 3, line 55 - * page 4, line 39 - * page 21, line 43 1,3,4,8,9 *	I) 04-03) line 14 * page 4, line 4 * line 44 *		o claim 2,5,7	G03C8/52 G03C1/815 C08K3/22	(Int.Cl.7)
X	EP 0 801 941 A (SHI 22 October 1997 (19 * page 4, line 44 - * page 7, line 31 - 1 *	97-10-22)	1			
X	EP 0 957 139 A (KAN 17 November 1999 (1 * page 2, line 54 - * page 6, line 49 - * page 7, line 17 * * page 9, line 40 - * page 13, line 1 -	999-11-17) line 55 * line 56 * line 45 *	1		TECHNICAL F SEARCHED	IELDS (Int.Cl.7)
X	line 35 *	03-03) d column, line 33 - d column, line 40 - column, line 1 * column, line 21 -	1		G03C C08K	
Y A	GB 714 412 A (POLAR 25 August 1954 (195 * page 2, line 80 - * page 3, line 36 - * page 7, line 34 -	4-08-25) line 85 *	6	2,5,7		
	The present search report has	been drawn up for all claims				
	Place of search	Date of completion of the search			Examiner	
	THE HAGUE	13 October 2003		Mag	rizos, S	
X : part Y : part doc A : tech O : nor	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone icularly relevant if combined with anotument of the same category innological background in-written disclosure rmediate document	E : earlier patent doo after the filing dat	cumer e n the or othe	nt, but publi application er reasons	shed on, or	



EUROPEAN SEARCH REPORT

Application Number

EP 01 12 9247

Category	Citation of document with indication of relevant passages	on, where appropriate,	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.7)	
Y	DE 196 13 992 A (AGFA-G 16 October 1997 (1997-1 * page 2, line 3 - line * page 2, line 30 - lin * page 2, line 51 - lin * page 8, line 32 - lin * page 9, line 30 - lin	0-16) 5 * e 41 * e 53 * e 35 *	1,2,5,7		
A	US 4 367 272 A (HAYASHI 4 January 1983 (1983-01 * column 1, line 6 - li * column 9, line 1 - li * column 15, line 18 - * column 17, line 7 - l	-04) ne 11 * ne 34 * line 40 *	2,6,7		
A	"Photographic processe RESEARCH DISCLOSURE., vol. 151, no. 62, Novem pages 75-87, XP00225751 KENNETH MASON PUBLICATI ISSN: 0374-4353 * page 82, right-hand c line 36 *	ber 1976 (1976-11), 1 ONS, HAMPSHIRE., GB	2,6,7	TECHNICAL FIELDS SEARCHED (Int.Cl.7)	
	The present search report has been d				
	Place of search THE HAGUE	Date of completion of the search 13 October 2003	Mari	Examiner	
X : part Y : part docu A : tech	ATEGORY OF CITED DOCUMENTS icularly relevant if taken alone icularly relevant if combined with another unent of the same category innological background —written disclosure	T : theory or principle E : earlier patent doc after the filing dat D : document cited in L : document cited fo	e underlying the incument, but publise en the application or other reasons	nvention shed on, or	



Application Number

EP 01 12 9247

CLAIMS INCURRING FEES
The present European patent application comprised at the time of filing more than ten claims.
Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims and for those claims for which claims fees have been paid, namely claim(s):
No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for the first ten claims.
LACK OF UNITY OF INVENTION
The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:
see sheet B
All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.
Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:
None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:



LACK OF UNITY OF INVENTION SHEET B

Application Number EP 01 12 9247

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. Claims: 1(in part),2(in part),3-5,7(in part)

Ultraviolet shielding filter agent comprising titanium oxide particles and polyhydric alcohol, and color diffusion transfer photographic filter unit containing the ultraviolet shielding filter agent

2. Claims: 1(in part),2(in part),6,7(in part)

Ultraviolet shielding filter agent comprising titanium oxide particles of a cylindical or spindle shape, and color diffusion transfer photographic filter unit containing the ultraviolet shielding filter agent

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

EP 01 12 9247

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.

13-10-2003

Patent document cited in search report		Publication date		Patent family member(s)		Publication date	
ΕP	1193550	A	03-04-2002	JP EP	2002107890 1193550		10-04-2002 03-04-2002
EP	801941	A	22-10-1997	AU AU DE EP US WO JP TW	724012 7589996 69629357 0801941 6123927 9718793 9202722 487579	A D1 A1 A A1 A	07-09-2000 11-06-1997 11-09-2003 22-10-1997 26-09-2000 29-05-1997 05-08-1997 21-05-2002
EP	957139	A	17-11-1999	EP JP US WO	0957139 3187440 6132743 9817730	B2 A	17-11-1999 11-07-2001 17-10-2000 30-04-1998
JΡ	1056607	Α	03-03-1989	NONE			
GB 	714412	A	25-08-1954	US BE DE FR NL NL	2662822 515350 932344 1075190 83290 173484	A C A C	15-12-1953 29-08-1955 13-10-1954
DE	19613992	Α	16-10-1997	DE US	19613992 5736308		16-10-1997 07-04-1998
US	4367272	A	04-01-1983	JP JP JP	1435454 56151936 62030620	Α	07-04-1988 25-11-1981 03-07-1987

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