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(54) Improved dye imbibition printing blanks and matrix films

(57) Dye imbibition printing blanks are disclosed comprising a support bearing on one side thereof a dye-receiving layer comprising a cationic mordant, and further comprising an antistat layer substantially free of cationic polymers. The antistatic layer is preferably provided on the opposite side of the support relative to the dye-receiving layer. Such antistatic layer provides improved antistatic properties which enable high manufacturing and processing speeds without adversely affecting printed image qualities. In a preferred embodiment, the dye receiving layer comprises a cationic mordant, a hydrophilic colloid and a plasticizer polymer, wherein the plasticizer polymer is a latex polymer having a glass transition temperature below about 30°C comprising from about 2 to 20 wt% of units having a quaternary ammonium group. Use of such latexes provide dye imbibition printing blanks substantially free of haze and brit-

tleness. A process for exposing dye imbibition printing matrix films is also disclosed comprising imagewise exposing a matrix film comprising a visible light sensitive silver halide emulsion containing colloid layer on a support to blue, green or red light, wherein the visible light sensitive emulsion is also sensitive to UV light and the toe contrast of the imaged matrix film is controlled by (i) incorporating a UV absorber in the colloid layer of the matrix film, and (ii) flash exposing the matrix film with UV light in the substantial absence of light having a wavelength above 410 nm, wherein the UV absorber provides sufficiently low absorption above 410 nm such that it does not substantially alter the effective photographic speed of the matrix film during the imagewise exposure or the mid scale contrast of the imaged matrix film, and sufficiently high absorption to the UV light to decrease the resulting toe contrast of the imaged matrix film.



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EUROPEAN SEARCH REPORT

Application Number
EP 96 42 0194

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.6)
A	US 4 266 044 A (Timmerman Daniel M ET AL) 5 May 1981 * column 12, line 38 - column 14, line 6; example 2 *	1-13	G03C7/25
A	EP 0 461 416 A (FUJI PHOTO FILM CO LTD) 18 December 1991 * page 31, line 15 - line 18 * * page 42, line 39 - page 43, line 27; table 2 *	1-13	
D,A	US 5 135 835 A (Aono Toshiaki ET AL) 4 August 1992 * column 11, line 56 - column 12, line 30 * * column 21, line 35 - line 45 *	1,8-11	
D,A	US 3 625 694 A (Cohen Hyman L ET AL) 7 December 1971 -----		
TECHNICAL FIELDS SEARCHED (Int.Cl.6)			
G03C			
The present search report has been drawn up for all claims			
Place of search	Date of completion of the search		Examiner
THE HAGUE	24 September 1996		PHILOSOPH L.
CATEGORY OF CITED DOCUMENTS		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	
<small>EPO FORM 1501.01 A2 (P04C01)</small>			



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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing more than ten claims

- All claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for all claims.
- Only part of the claims fees 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 claims:
- 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 requirement of unity of invention and relates to several inventions or groups of inventions, namely:

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- All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.
- 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: 1-8,12,13



LACK OF UNITY OF INVENTION

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

1. Claims 1-8,12,13 : Dye inhibition printing blank comprising an antistatic layer free of cationic polymers.
2. Claims 9-11 : Receiving layer of a dye inhibition printing blank comprising a specific latex polymer plasticizer.
3. Claims 14-20 : Process for exposing a dye inhibition printing matrix film comprising a UV absorber in a variable light sensitive silver halide emulsion which is also sensitive for UV light.