

(19) World Intellectual Property Organization
International Bureau(43) International Publication Date
19 October 2006 (19.10.2006)

PCT

(10) International Publication Number
WO 2006/108745 A1

(51) International Patent Classification:

C09D 11/02 (2006.01) **C07F 7/08** (2006.01)
C09D 1/00 (2006.01)

(21) International Application Number:

PCT/EP2006/060658

(22) International Filing Date: 13 March 2006 (13.03.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:

05102337.2 23 March 2005 (23.03.2005) EP

(71) Applicant (for all designated States except US): **CIBA SPECIALTY CHEMICALS HOLDING INC.** [CH/CH]; Klybeckstrasse 141, CH-4057 Basel (CH).

(72) Inventors; and

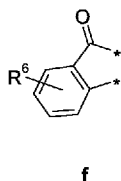
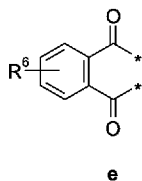
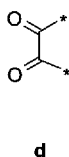
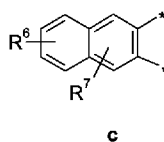
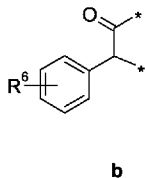
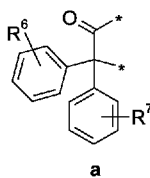
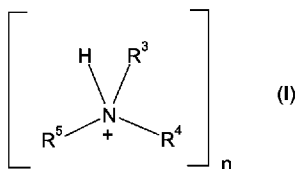
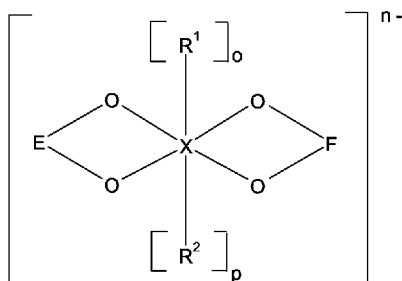
(75) Inventors/Applicants (for US only): **CAMPBELL, Jonathan** [GB/CH]; Bettingerstrasse 32, CH-4125 Riehen (CH). **WHITWORTH, John** [GB/GB]; 4 RivingtonGrove, Audenshaw Manchester M34 5GG (GB). **PLATT, Alan** [GB/GB]; 4 Weslea Street, Failsworth Manchester M35 9EB (GB). **STREET, Ian** [GB/GB]; 11 Senior Road, Peel Green, Eccles Manchester M30 7PZ (GB).(74) Common Representative: **CIBA SPECIALTY CHEMICALS HOLDING INC.**; Patent Department, Klybeckstrasse 141, CH-4057 Basel (CH).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

(54) Title: COATING COMPOSITIONS FOR MARKING SUBSTRATES



(57) Abstract: The present invention provides coating compositions for marking substrates, which comprises a colour former, an amine salt of an organic metal compound, a binder, a solvent, and optionally additional components, wherein the amine salt of the organic metal compound is of formula (I) in which X is silicon or boron, and E and F are the same or different and are selected from the group consisting of a, b, c, d, e, f, g, h in which R⁶ and R⁷ are the same or different are hydrogen, C₁₋₄-alkyl, C₁₋₄-alkoxy, halogen, amino or carboxy, and for X = silicon o = 1 and p = 0, and R¹ is aryl, aralkyl or C₁₋₄-alkyl₂ or o = 1 and p = 1, and R³ and R⁴ together form a one residue selected from the group consisting of a, b, c, d, e, f, g and h, and for X = boron o = 0 and p = 0, and R³, R⁴ and R⁵ are the same or different and are hydrogen, C₁₋₁₂-alkyl, C₁₋₆-hydroxyalkyl, allyl, aralkyl or arylsulfonyl, in which aralkyl or arylsulfonyl can be substituted with C₁₋₄-alkyl, or R³ and R⁴ together with the nitrogen to which they are attached

form a morpholino or piperidino ring. The present invention also provides a process for the preparation of the composition of the present invention, substrates coated with these compositions, a process for preparing coated substrates, a process for preparing a marked substrate using these compositions, a marked substrate obtainable by the latter process and amine salts of the organic metal compounds of formula I.



European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*