

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
3 November 2011 (03.11.2011)

PCT

(10) International Publication Number
WO 2011/134908 A1

(51) International Patent Classification:
C09D 7/00 (2006.01) **C09D 7/12** (2006.01)

(21) International Application Number:
PCT/EP2011/056492

(22) International Filing Date:
22 April 2011 (22.04.2011)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/328,401 27 April 2010 (27.04.2010) US
10161204.2 27 April 2010 (27.04.2010) EP

(71) Applicant (for all designated States except US): **AKZO NOBEL COATINGS INTERNATIONAL B.V.**
[NL/NL]; Velperweg 76, NL-6824 BM Arnhem (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **WHEELER, Stephen, Arthur** [GB/GB]; 47 Beechwood Gardens, Slough Berkshire SL1 2HP (GB). **WOODS, Anthony, David** [GB/GB]; 28 Phipps Road, Slough Berkshire SL1 6NG (GB). **EMMETT, Simon, Nicholas** [GB/GB]; 5 Bulkely Close, Englefield Green, Egham Surrey TW20 0NS (GB). **PEREZ-AMOROS, Javier** [ES/GB]; 22 Amity Road, Reading Berkshire RG1 3LJ (GB).

(74) Agent: **ALFERINK, Petrus, Johannes, Theodorus, c.s.**;
Akzo Nobel N.V., Legal, IP & Compliance, P.O. Box 9300, NL-6800 SB Arnhem (NL).

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

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: IMPROVED LOW TITANIUM DIOXIDE COATINGS

(57) Abstract: An aqueous coating composition having a PVC of from 78 to 88% comprising, based on the total volume solids of the dry coating unless otherwise stated, a) opacifying pigment particles comprising: i) from 3 to 10% titanium dioxide, ii) from 0 to 20% of hollow polymeric particles; b) non-opacifying extender particles comprising: i) calcium magnesium carbonate, and/or ii) calcium carbonate, and/or iii) nepheline syenite, and/or iv) kaolin, wherein, i)+ii)+iii)+iv) = 40 to 80% and iv) is 0 to 20%; c) polymer binder particles of calculated Fox Tg of from 25 to 70°C having an acid value of from 15 to 65mg KOH/g of polymer and wherein the polymer particles are derived from acrylic monomers and optionally further comprising styrene and/or its derivatives; d) dispersant having a weight average molecular weight of at least 3500 Daltons; e) fugitive coalescing solvent, wherein the composition is free of non- fugitive coalescing solvent.



WO 2011/134908 A1