



- (51) International Patent Classification:
C09D 7/00 (2006.01)
- (21) International Application Number:
PCT/EP2012/070907
- (22) International Filing Date:
23 October 2012 (23.10.2012)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
11186773.5 26 October 2011 (26.10.2011) EP
- (71) Applicant: **AKZO NOBEL COATINGS INTERNATIONAL B.V.** [NL/NL]; Velperweg 76, NL-6824 BM Arnhem (NL).
- (72) Inventors: **EMMETT, Simon Nicholas**; 5 Bulkeley Close, Englefield Green, Egham Surrey TW20 0NS (GB). **PEREZ-AMOROS, Javier**; 22 Amity Road, Reading Berkshire RG1 3LJ (GB). **WHEELER, Stephen Arthur**; 47 Beechwood Gardens, Slough Berkshire SL1 2HP (GB). **WOODS, Anthony David**; 28 Phipps Road, Slough Berkshire SL1 6NG (GB). **LEDINGHAM, Katherine Mary**; 6 The Rise, High Wycombe Buckinghamshire HP13 7BB (GB). **HORNY, Julie Anne**; 143 Arthur Road, Windsor Berkshire SL4 1RU (GB).
- (74) Agent: **DE VRIES, Adriaan Jacobus 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, BN, 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, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, 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, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, 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 SOLVENT-FREE LOW ENERGY COATINGS

(57) Abstract: An aqueous coating composition having a PVC of from 70 to 80% comprising, based on the total volume solids of the dry coating unless otherwise stated, a) opacifying pigment particles comprising i) from 4 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 75% (to be announced by Katy) and iv) is 0 to 45% c) styrene-acrylic polymer binder particles having a calculated Fox Tg of from -30 to 5°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 which is insoluble in water at pH 3 wherein the composition is free of volatile organic solvent.t.



WO 2013/060657 A1