



(51) International Patent Classification:

C08J 3/11 (2006.01) *C09D 125/06* (2006.01)
C08J 11/08 (2006.01) *C08K 3/013* (2018.01)

TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, KM, ML, MR, NE, SN, TD, TG).

(21) International Application Number:

PCT/IB2017/058127

(22) International Filing Date:

19 December 2017 (19.12.2017)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

201700013 04 January 2017 (04.01.2017) CL

(72) Inventors; and

(71) Applicants: ACUÑA ROUGIER, Cristina Lucía [CL/CL]; Av. Padre Hurtado Sur, 1861, Torre i, depto. 31, Las Condes, Santiago, 7600652 (CL). CIFUENTES EAGLEHURST, Constanza Catalina de Lourdes [CL/CL]; Santa Julia 240, depto. 14, Ñuñoa, Santiago, 7760129 (CL).

(74) Agent: CLARKE, MODET & CO. CHILE; Huerfanos 835, piso 10, Of. 1001, Santiago, Santiago, 8320176 (CL).

(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, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IR, IS, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, 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, SA, 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, ST, 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,

Declarations under Rule 4.17:

- as to the identity of the inventor (Rule 4.17(i))
- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))
- as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))
- of inventorship (Rule 4.17(iv))

Published:

- with international search report (Art. 21(3))
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))

(54) Title: PROCESS FOR FABRICATION OF PAINTS BASED ON EXPANDED POLYSTYRENE (EPS) WASTE

(57) Abstract: The invention is related with the paint industry to use on surfaces of solid materials. The invention is a process to obtain paints using expanded polystyrene (EPS) waste as a raw material. From this technology we pursue to transform a waste into a useful product, saving resources and at the same time contributing to solve environmental contamination problems. This invention is composed by the following stages, a.- mixing the EPS waste with an organic solvent until reaching a concentration between 20% and 80% p/p; decanting impurities of the mixture obtained in stage (a) during 24 to 120 h; c.- collecting the supernatant obtained in stage (b); d.- dispersing a pigment in the supernatant obtained in stage (c) during 10 to 30 min at a velocity between 1.000 rpm and 2.000 rpm; e.- mixing the substance obtained in stage (d) with an organic solvent at a velocity between 300 rpm and 1.000 rpm until reaching the desired concentration. Additionally, the invention claims the formulation of a paint that is formed by 0% to 40% of pigment, 70% to 1% of EPS, 0,5% to 5,0% of dispersant, and the difference is solvent.