

3d/08/02
2002052710

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

(19) World Intellectual Property Organization
International Bureau



162162

(43) International Publication Date
13 September 2001 (13.09.2001)

PCT

(10) International Publication Number
WO 01/66660 A3

- (51) International Patent Classification⁷: C09D 5/00, C08J 7/04, 7/06, B05D 5/00, B32B 27/08, C09J 4/06, C08F 8/42
- (21) International Application Number: PCT/US01/05537
- (22) International Filing Date: 21 February 2001 (21.02.2001)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
09/518,572 3 March 2000 (03.03.2000) US
- (71) Applicants: **DOW CORNING CORPORATION** [US/US]; 2200 West Salzburg Road, Auburn, MI 48611 (US). **DOW CORNING S.A.** [BE/BE]; Parc Industriel, B-7180 Seneffe (BE). **EP TECHNOLOGY PARTNERS, L.P.** [US/US]; 42 Industrial Way, Wilmington, MA 01887 (US).
- (72) Inventors: **NANAVATI, Shrenik, M.**; 5407 Trailridge Drive, Midland, MI 48642 (US). **WYMAN, John, E.**; 693 Emeril Court, Sanibel, FL 33957 (US). **MERLIN, Patrick, Jacques, J.**; Rue Hubermont 10, B-7063 Neufville (BE). **GALLEZ, Laurence**; 21, rue d'Herchies, B-7050 Erbisoeul (BE).
- (74) Agent: **ZOMBECK, Alan**; Patent Department - Mail C01232, Dow Corning Corporation, 2200 West Salzburg Road, Auburn, MI 48611 (US).
- (81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW.
- (84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
- Published:
— with international search report
- (88) Date of publication of the international search report:
7 March 2002
- 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.*



ACTION

WO 01/66660 A3

(54) Title: BARRIER COATINGS USING POLYACIDS, PROCESS FOR OBTAINING THEM AND POLYCARBOXYLATE COATING COMPOSITIONS

(57) Abstract: A process for treating a surface of a substrate to improve the oxygen, carbon dioxide, flavor and odor gas barrier properties of the substrate with an organic acid having at least two acid substituents selected from the group consisting of a polybasic carboxylic acid, a polymer of an unsaturated carboxylic acid and a co-polymer of an unsaturated carboxylic acid, by applying the acid on to the substrate to form a layer, and exposing the layer to moisture. A variety of other types of additives may be included in the coating applied to the substrate with the acid including compounds of the formula $R_nX_{3-n}Si(CH_2)_nY$, a condensation catalyst, a solvent, and/or a filler.