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(21) International Application Number: PCT/US98/22299 (22) International Filing Date: 21 October 1998 (21.10.98) (30) Priority Data: 60/062,873 21 October 1997 (21.10.97) US (71) Applicant (for all designated States except US): THE DOW CHEMICAL COMPANY [US/US]; 2030 Dow Center, Midland, MI 48674 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): CHEUNG, Yunwa, W. [US/US]; 104 Rosemary Lane, Lake Jackson, TX 77566 (US). HAHN, Stephen, F. [US/US]; 4302 James Street, Midland, MI 48642 (US). STEVENS, James, C. [US/US]; 2026 Pecan Trail Drive, Richmond, TX 77469 (US). TIMMERS, Francis, J. [US/US]; 4605 Lund Drive, Midland, MI 48642 (US). SCHMIDT, Gregory, F. [US/US]; 215 Crestview Drive, Kennett Square, PA 19348 (US). HO, Thoi, H. [US/US]; 54 Orchid Court, Lake Jackson, TX 77566 (US). TERBRUEGGEN, Robert, H. [US/US]; Apartment H, 1742 Grevelia Street, South Pasadena, CA 91030 (US).		(74) Agent: MCKINNEY, Osborne, K.; Patent Dept., B-1211, 2301 Brazosport Boulevard, Freeport, TX 77541 (US). (81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, 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), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(54) Title: SULFONATED SUBSTANTIALLY RANDOM INTERPOLYMERS, BLENDS THEREWITH AND ARTICLES MADE THEREFROM (57) Abstract The present invention pertains to sulfonated substantially random interpolymers made from monomer components comprising from 1 to 65 mole percent of (a) at least one vinyl or vinylidene aromatic monomer, or (b) at least one hindered aliphatic or cycloaliphatic vinylidene monomer, or (c) a combination of at least one vinyl or vinylidene aromatic monomer and at least one hindered aliphatic or cycloaliphatic vinylidene monomer, and from 35 to 99 mole percent of at least one aliphatic α-olefin having from 2 to 20 carbon atoms; and optionally, from 0 to 20 mole percent of a diene containing from 4 to 20 carbon atoms; wherein the sulfonated interpolpolymer contains at least one mer (or moiety) of a group represented by the formula $-SO_3-M$ where M is hydrogen or a group 1, 7 or 12 metal in ionic form or combination thereof. The present invention also pertains to blends of these polymers with polyamides and polyolefins. These blends are useful as materials which can be formed into a wide variety of plastic articles which take advantage of the combination of toughness, heat resistance, and solvent resistance. The present invention also pertains to articles prepared from substantially random interpolymers which are surface sulfonated.		