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(21) International Application Number: PCT/US97/22367 (22) International Filing Date: 5 December 1997 (05.12.97) (30) Priority Data: 08/758,749 6 December 1996 (06.12.96) US (71) Applicant: KIMBERLY-CLARK WORLDWIDE, INC. [US/US]; 401 North Lake Street, Neenah, WI 54956 (US). (72) Inventors: TURKEVICH, Leonid, Anthony; 10760 Centennial Drive, Alpharetta, GA 30202 (US). MYERS, David, Lewis; 5970 Surrey Court, Cumming, GA 30130 (US). (74) Agents: MAYCOCK, William, E. et al.; Kimberly-Clark Worldwide, Inc., 401 North Lake Street, Neenah, WI 54956 (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, GE, GH, 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, UZ, VN, YU, ZW, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, 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: METHOD OF PREPARING SMALL PARTICLE DISPERSIONS

(57) Abstract

A method of preparing a dispersion of small particles in a polymeric precursor, which method involves providing a mixture of a particulate material and a surfactant in a nonaqueous solvent, forming a dispersion of the particulate material in the nonaqueous solvent, combining the resulting dispersion of particulate material in the nonaqueous solvent with a precursor material, and heating the combination of the dispersion of particulate material and the precursor material, with mixing, to a temperature sufficient to volatilize the nonaqueous solvent. The surfactant is soluble in the nonaqueous solvent and is adapted to stabilize the particulate material against agglomeration. The nonaqueous solvent swells the polymeric precursor near the boiling point of the nonaqueous solvent. The boiling point of the nonaqueous solvent is greater than a temperature at which the polymeric precursor may be mixed and below a temperature at which the polymeric precursor polymerizes or decomposes. In certain embodiments, the particulate material is an inorganic material. For example, the inorganic material may be a ferroelectric material, such as barium titanate and lead titanate. In other embodiments, the particulate material is a ferromagnetic material, such as magnetite and barium ferrite.