

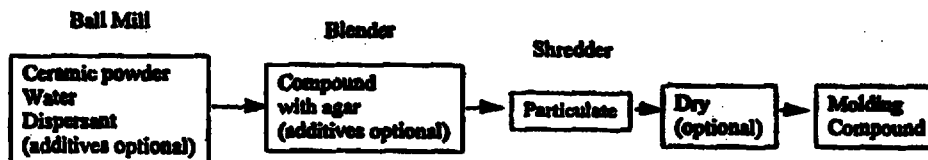


INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : C04B 35/486, 35/624, 35/622	A1	(11) International Publication Number: WO 99/12864 (43) International Publication Date: 18 March 1999 (18.03.99)
(21) International Application Number: PCT/US98/18663 (22) International Filing Date: 8 September 1998 (08.09.98) (30) Priority Data: 08/929,247 10 September 1997 (10.09.97) US (71) Applicant: ALLIEDSIGNAL INC. [US/US]; 101 Columbia Road, P.O. Box 2245, Morristown, NJ 07962-2245 (US). (72) Inventors: VAN WEEREN, Remco; 6 Old Turnpike Road, Oldwick, NJ 08858 (US). GOLDBACKER, Jeffrey; 907 Edgehill Road, Findlay, OH 45840 (US). WHALEN, Philip, J.; 1 Meredith Drive, Sparta, NJ 07871 (US). (74) Agents: CRISS, Roger, H. et al.; AlliedSignal Inc., Law Dept. (R. Fels), 101 Columbia Road, P.O. Box 2245, Morristown, NJ 07962-2245 (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, GM, 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, 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>

(54) Title: INJECTION MOLDING OF STRUCTURAL ZIRCONIA-BASED MATERIALS BY AN AQUEOUS PROCESS

Molding Compound



(57) Abstract

A molding compound is used to form net-shape or near net-shape articles consisting essentially of about 50 to 100 wt.% $ZrO_2(Y_2O_3)$ and 0 to about 50 wt.% Al_2O_3 . The compound, containing ceramic powders having an average particle size less than $1\mu m$, is mixed with a liquid carrier, a gel forming binder and processing additives and can be molded at relatively low pressures in a conventional injection molding machine.