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

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
7 December 2000 (07.12.2000)

PCT

(10) International Publication Number
WO 00/73396 A1

(51) International Patent Classification[7]: C09G 1/02

(21) International Application Number: PCT/US00/11675

(22) International Filing Date: 1 May 2000 (01.05.2000)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
09/321,036 27 May 1999 (27.05.1999) US

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(81) Designated States *(national)*: AE, AG, AL, AM, AT, AT (utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ (utility model), DE, DE (utility model), DK, DK (utility model), DM, DZ, EE, EE (utility model), ES, FI, FI (utility model), 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, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (utility model), SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

(84) Designated States *(regional)*: ARIPO patent (GH, GM, KE, LS, MW, 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), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published:
— *With international search report.*

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.



G00001

WO 00/73396 A1

(54) Title: SLURRY COMPOSITION AND METHOD OF CHEMICAL MECHANICAL POLISHING USING SAME

(57) Abstract: The present invention provides a slurry composition for chemical mechanical polishing comprising spinel particles having the formula: $AO \cdot xZ_2O_3$ wherein A is at least one divalent cation, Z is at least one trivalent cation, and $0.01 \leq x \leq 100$. The present invention also includes a method of chemical mechanical polishing the surface of a substrate using slurry compositions that include these spinel particles. The slurry compositions of the present invention provide the desired level of planarization and selectivity for both metal and oxide surfaces. In addition, the slurry compositions of the invention can be prepared such that they are substantially free of alpha phase alumina particles and other high hardness particles to produce a scratch-free polished surface.



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