

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

(19) World Intellectual Property Organization
International Bureau



2001 06 795-8



(43) International Publication Date
21 December 2000 (21.12.2000)

PCT

(10) International Publication Number
WO 00/76920 A1

(51) International Patent Classification⁷: C01F 17/00,
C09K 3/14, H01L 21/306

Apartment 6, Natick, MA 01760 (US). KHAUND, Arup;
18 Hemlock Street, Northborough, MA 01532 (US).

(21) International Application Number: PCT/US00/15479

(74) Agents: DAVIS, Anthony, G., M.; Davis and Bujold,
4th floor, 500 North Commercial Street, Manchester, NH
03101 et al. (US).

(22) International Filing Date: 6 June 2000 (06.06.2000)

(25) Filing Language: English

(81) Designated States (*national*): AU, BR, CA, CN, IL, JP,
KR, MX, SG.

(26) Publication Language: English

(84) Designated States (*regional*): European patent (AT, BE,
CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC,
NL, PT, SE).

(30) Priority Data:
09/334,222 16 June 1999 (16.06.1999) US
09/553,968 21 April 2000 (21.04.2000) US

Published:

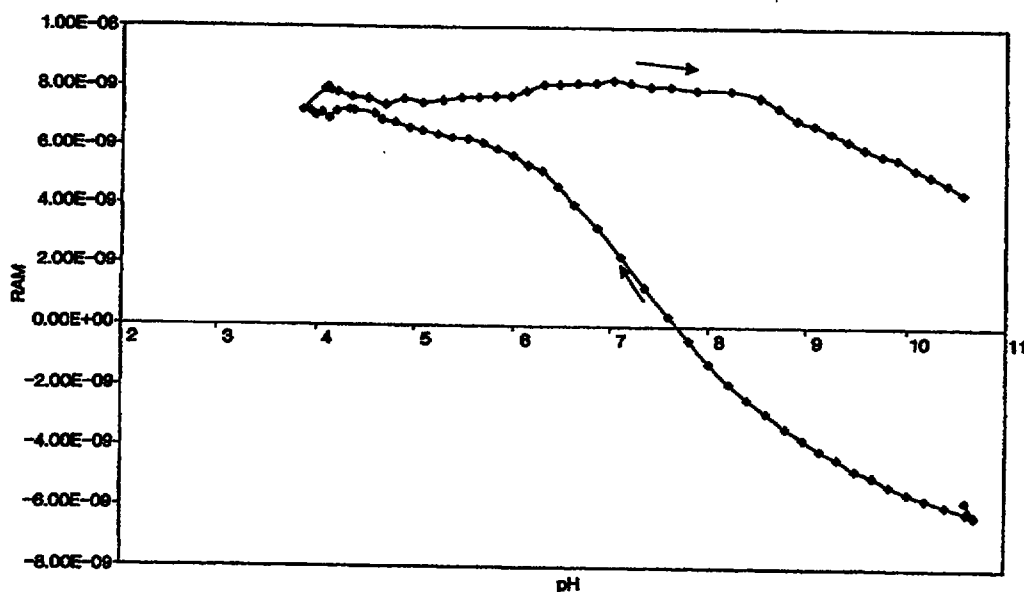
- With international search report.
- Before the expiration of the time limit for amending the
claims and to be republished in the event of receipt of
amendments.

(71) Applicant: SAINT-GOBAIN INDUSTRIAL CERAM-
ICS, INC. [US/US]; 1 New Bond Street, Box Number
15138, Worcester, MA 01615-0138 (US).

(72) Inventors: GARG, Ajay, K.; s/o R.S. Garg, Opposite Am-
rit Dairy, Bhawar Kua Choraha, Indore, MP 452 017 (IN).
TANIKELLA, Brahmanandam, V.; 31 Woodbine Road,

For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.

(54) Title: IMPROVED CERIA POWDER



(57) Abstract: A polishing slurry, useful in optical or CMP applications, comprises a ceria with a BET surface area of at least 10 m²/gm. The slurry may be made by subjecting a commercial ceria slurry comprising agglomerates to a mechano-chemical treatment at a pH of from 9 to 11 using media that are low purity alpha alumina or zirconia. Preferred slurries maintain a positive surface charge at all pH values. CMP slurries preferably comprise in addition an anionic surfactant to aid in removal of surface residues.

WO 00/76920 A1