

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
6 May 2004 (06.05.2004)

PCT

(10) International Publication Number
WO 2004/037877 A3

(51) International Patent Classification⁷: **C08G 77/12**,
77/20, B05D 3/02, 3/06, C23C 16/00, H01L 21/31

INC., PO Box 2245, 101 Columbia Road, Morristown, NJ
07962 (US).

(21) International Application Number:
PCT/US2003/017658

(74) Agent: **THOMPSON, Sandra**; Bingham McCutchen
LLP, Three Embarcadero Center, San Francisco, CA
94111-4067 (US).

(22) International Filing Date: 3 June 2003 (03.06.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10/161,561 3 June 2002 (03.06.2002) US

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

(71) Applicant (*for all designated States except US*): **HON-
EYWELL INTERNATIONAL INC.** [US/US]; PO Box
2245, 101 Columbia Road, Morristown, NJ 07962 (US).

(84) Designated States (*regional*): ARIPO patent (GH, GM,
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): **BEDWELL,
William** [US/US]; HONEYWELL INTERNATIONAL
INC., PO Box 2245, 101 Columbia Road, Morristown, NJ
07962 (US). **HACKER, Nigel** [GB/US]; HONEYWELL
INTERNATIONAL INC., PO Box 2245, 101 Columbia
Road, Morristown, NJ 07962 (US). **LEUNG, Roger**
[US/US]; HONEYWELL INTERNATIONAL INC., PO
Box 2245, 101 Columbia Road, Morristown, NJ 07962
(US). **IWAMOTO, Nancy** [US/US]; HONEYWELL IN-
TERNATIONAL INC., PO Box 2245, 101 Columbia Road,
Morristown, NJ 07962 (US). **NEDBAL, Jan** [CZ/US];
HONEYWELL INTERNATIONAL INC., PO Box 2245,
101 Columbia Road, Morristown, NJ 07962 (US). **XIE,
Songyuan** [CN/US]; HONEYWELL INTERNATIONAL
INC., PO Box 2245, 101 Columbia Road, Morristown, NJ
07962 (US). **MORO, Lorenza** [IT/US]; HONEYWELL
INTERNATIONAL INC., PO Box 2245, 101 Columbia
Road, Morristown, NJ 07962 (US). **MUKHERJEE,
Shyama** [US/US]; HONEYWELL INTERNATIONAL

Published:

— with international search report

(88) Date of publication of the international search report:
13 January 2005

(15) Information about Correction:

Previous Correction:

see PCT Gazette No. 46/2004 of 11 November 2004, Sec-
tion II

*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: ORGANOSILOXANES

(57) Abstract: The present invention provides an organosiloxane comprising at least 80 weight percent of Formula I: $[Y_{0.01-1.0}SiO_{1.5-2}]_a[Z_{0.01-1.0}SiO_{1.5-2}]_b[H_{0.01-1.0}SiO_{1.5-2}]_c$ where Y is aryl; Z is alkenyl; a is from 15 percent to 70 percent of Formula (I); b is from 2 percent to 50 percent of Formula (I); and c is from 20 percent to 80 percent of Formula (I). The present organosiloxane may be used as ceramic binder, high temperature encapsulant, and fiber matrix binder. The present composition is also useful as an adhesion promoter in that it exhibits good adhesive properties when coupled with other materials in non-microelectronic or microelectronic applications. Preferably, the present compositions are used in microelectronic applications as etch stops, hardmasks, and dielectrics.



WO 2004/037877 A3